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cta Chicago Transit Authority

Transition Plan to meet Federal Section 504 Regulations

for Chicago Area Transportation Study

General Operations Division
October 1, 1980

TRANSPORTATION
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504 TRANSITION PLAN
TABLE OF CONTENTS

EXECUTIVE SUMMARY . . . . . Section A

RULES AND REGULATIONS . . . . . Section B

HANDICAPPED POPULATION . . . . . Section C
- Mobility Limited Market
- Department of Public Works Survey Data

INTERIM SERVICE . . . . . Section D
- Service Coordination

ALTERNATIVE COMPLIANCE PLAN . . . . . Section E
- CTA Recommendation
- Accessible Stations and Fast Link Bus Routes (map)
- Ridership, Operating Cost, and Vehicles Required
- Accessible Key Stations
- Service Standards
- Non-key Stations
- Elevator Operating Costs

STATIONS . . . . . Section F
- Full Compliance Plan
- Key Stations Map
- Elevator Operating Costs
- CTA Station Modernization Program
- Station Inventory

BUSES . . . . . Section G
- Full Compliance, Capital Costs
- Full Compliance, Operating Costs
- Bus Replacement Program

RAIL CARS . . . . . Section H
- Transition Plan, Full Compliance
- Alternate Rail Car Replacement Program
- CTA Rail Car Replacement Program

CONNECTOR SERVICE . . . . . Section I

POLICIES, PROGRAMS AND PRACTICES . . . . . Section J

A
B
C
D
E
F
G
H
I
J

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SUMMARY

504 TRANSITION PLAN

Federal 504 regulations set specific standards.

The Chicago Area Transportation Study (CATS) as the Metropolitan Planning Organization is responsible for a regional transition and compliance plan (deadline January 2, 1981) to be effective after July 1982.

CTA and RTA are now developing their elements of the plan.

INTERIM SERVICE PLAN

First requirement is for interim service until full compliance.

CTA will begin initial interim service in September 1981 using recently ordered 20 small lift equipped buses.

These will serve only handicapped persons who cannot now use transit.

Service will be a mix of local area dial a ride, "fast link" through buses and downtown distributor buses. Service will be weekdays, 6:30 a.m. to 9:30 p.m. Weekends will be 9:00 a.m. to 5:00 p.m.

Fare will be regular CTA adult fare.

CTA now establishing management structure to operate this service.

CTA is investigating a separate maintenance and operating base.

Drivers will receive special training.

CTA is requesting 20 additional small buses in FY 81 Capital Improvement Program.

Regulation requires 2% of Regional Section 5 funding be allocated. CTA share plus or minus $1 million annually. Actual cost will be greater than allocated.

Initial hours of service and response time will improve as operating experience is developed.

It is not proposed to replace any existing service.

FULL COMPLIANCE PLAN

TO FULLY COMPLY, CTA HAS developed a three part full compliance plan covering:
- Stations
- Buses
- Rail Cars

Full station compliance requires that 71 "key" stations be accessible to wheel chair passengers at a cost of over $200 million.

Nine stations are either completed, under construction or in design. Four others will be completed as part of the O'Hare Extension.

Twenty-two additional ones would be completed within the next 12 years, 12 of these within five years.

In addition to increased capital costs for elevators or ramps, there will be substantial maintenance costs for the 118 elevators installed at approximately $2.4 million per year.

At present CTA has 194 rail cars with accessible doors. Six hundred cars now on order or option will also have accessible doors. It is not believed feasible to convert doors on the other 400 cars prior to their replacement in mid 1990's.

There remain operational and safety problems connected with full accessibility on our rapid transit system.

The question of a gap filler device to bridge distance between car and platform has not been resolved as no such device exists and may not be needed.

Full compliance requires that ⅓ of the regular bus fleet be lift equipped by 1989. If all buses scheduled to be purchased by CTA were lift equipped, we would comply by 1987. This represents an added capital cost of $21 million and eventual operating costs of $8 million per year.

ALTERNATIVE COMPLIANCE PLAN

CTA has an alternative "local option" plan to provide the highest level of actual service to handicapped riders and make maximum feasible use of the regular system.

Interim small bus service plan is continued and expanded using concept of dial-a-ride, "fast link" through buses and downtown distributors.

In addition, approximately 28 rapid transit stations would be made accessible to allow integrated use of the rapid system. Some regular buses would be lift equipped.

CTA would participate in coordination of services with various human service agencies.

September 26, 1980
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Chicago Transit Authority
General Operations Division
Operations Planning Department
Routes/Systems

504 Regulations	OP-x80221
Rules and Planning Requirements	9/19/80

Federal Mandate

May 1979, the U.S. Department of Transportation issued regulations to implement Section 504 of the Rehabilitation Act of 1973. These regulations set specific requirements for "program accessibility" for buses, rapid transit and commuter rail. An evaluation of current practices, programs and policies that affect travel by handicapped persons is required. In addition, a transition plan, a staged 30-year planning and programming document describing the transition from the present to the achievement of "program accessibility" (complete regulatory compliance such as lifts on buses, elevators at key stations, etc.) is required.

The transition plan requires the endorsement of the Metropolitan Planning Organization (CATS Policy Committee) and consultation with the handicapped community.

Transition Plan Requirements

The transition plan elements include:

a) Identification of vehicles, facilities, and services that are not accessible.

b) Assessment of current plans and programs.

c) Identification of improvements to policies, practices, and procedures required to make transit accessible.

d) Interim service plan (service required until the system is "program accessible") and an explanation of how service levels and fares were determined.

e) Establishment of priorities for improvements leading to system accessibility and implementation schedules.

f) Identification of coordination activities needed and planned to improve effectiveness of existing services for the handicapped.

g) Estimation of total costs to comply with the regulations and identification of all sources of funding.

h) Description of community participation in the development of the plan.

Effective Date	General Requirements	CTA Requirements
July 2, 1984	- One vehicle per rapid transit train must be accessible to wheelchair users. - All rapid transit vehicles must be accessible to handicapped persons who can use steps.	- CTA has determined that as a practical working rule, all cars must be made accessible. This requires costly door modifications or replacement of rail cars. Cost estimate for door modification is $282.3 M (1979 dollars).
July 2, 1989	- One-half peak period bus service must be accessible to wheelchair users. - Program accessibility for bus systems must be achieved.	- The 125 articulated buses to be purchased are programmed to have lifts.
July 2, 1991	- One-third of key* rapid transit stations must be accessible. - "Effective and efficient" connector service between existing key and inaccessible stations must be in place, e.g. accessible Lake Street buses.	- To be determined by CTA and UMTA, with significant handicapped involvement. Cost estimate for improvements is approx. $195.1 M (1979 dollars) per 321 Study. - This will require a few route modifications or use of paratransit services.
July 2, 2009	- All key rapid transit stations must be accessible. - Complete connector service between accessible and inaccessible stations must be in place. - Program accessibility for rail systems must be achieved.	- To be determined by CTA and UMTA, in consultation with handicapped persons. - To be determined. - Key station accessible to wheelchair users; non-key stations accessible to step-users; all rail car doors wide enough for wheelchair entry.

* Stations are defined as "key" if they are any one of the following: terminals, rapid transit transfers, rapid rail to commuter rail transfer; 15% above average entering traffic; "near" hospitals, colleges, universities, government centers, employment centers; served by three or more bus routes, or serve large numbers of handicapped persons. (See OP-y79239 for preliminary list.)

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504 VEHICLE AND FIXED FACILITY REQUIREMENTS

Effective Date	General Requirements	CTA Requirements
July 2, 1979	- Equivalent of 2% of Section 5 funds* per year must be spent on E & H projects in TIP. - All new buses purchased must be made accessible.	
Jan. 2, 1980	- Initiate evaluation of policies, practices, and procedures towards the elderly and handicapped.	- Consultation with handicapped groups is required. Evaluation and modifications must be completed by July, 1982.
Jan. 2, 1981	- Regional Transition Plan (including Interim Service Plan) must be completed.	- To be developed in consultation with the handicapped.
July 2, 1982	- Interim Service must begin.	- CTA/RTA must spend equivalent of at least 2% of Section 5 funds, more if rail waiver is obtained.**
	- Fixed facilities must be made accessible to step-users unless the modification cost is extraordinarily expensive.	
	- Bus systems must be accessible to handicapped persons who can use steps.	- Farebox handrails, safety strips on steps on stairwells. etc. CTA complies.
	- All rapid transit stations must be accessible to those handicapped persons who can use steps.	- Exact requirements to be determined. Would include steps, handrails, etc. Estimated cost is $25 million.
	- "Key" stations not involving extraordinary costs must be made completely accessible.	- There are 71 "key" stations requiring improvements. Estimated cost is $195.1 M.
Jan. 1, 1983	- Rapid transit vehicles should include a gap-closing device, if necessary.	- Will not affect current Budd contract for 300 RT cars. Device not invented. Retro-fit required if and when invented.

* Approximately $2 million in FY '80.

** If a rail waiver is obtained, at least 5%, but not more than 7%, of Section 5 funds, (approx. $5 million--FY '80 5% min.) would have to be spent on an alternative service that is judged as good or better than full accessibility (compliance).

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or approximately 31,900 trips per day.
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ps made in the 48 hours prior to the interview
on of all trips, 61.8%, were made in an auto or
person as driver or passenger. Another 4.2% of all

vily auto dependent than the total mobility limited popu-
ML trips are made in an auto or van, with another 9.4% of
icabs. The combined percentages total 81.7% of all SML rides,
,800 daily auto and taxi rides.

dents were asked about alternative modes of public transit. The
e is arranged in order of increasing ease of access.

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The Department of Public Works of the City of Chicago commissioned an extensive telephone survey of mobility limited persons. In late 1976, the Survey Research Laboratory called 31,331 telephone numbers and reached 22,419 residences. Of the 63,915 persons living in those residences, 2,269 were found to be mobility limited in some way. This 3.55% of the survey population may be considered a reliable estimate of the proportion of the mobility limited people in the population of the City of Chicago. Using a 1975 estimated population of Chicago as 3.2 million, Chicago has approximately 113,000 mobility limited residents.

Severely mobility limited (SML) persons are defined as persons who cannot use or who have great difficulty using a CTA bus. The survey asked, "Are you physically able to use a CTA bus. . . easily, with some difficulty, with great difficulty, or not at all?" Of all mobility limited respondents, 27.3% said they were either unable to use a CTA bus or could do so only with great difficulty. This means that Chicago has approximately 31,000 severely mobility limited residents, an estimated 0.97% of the population of the City.

There was very close correlation between those who said they have great difficulty using, or could not use, a CTA bus and between those who claimed great difficulty or inability to perform thirteen transportation related activities. These scores clearly show that response to the question, "Are you physically able to use a CTA bus. . ." is an excellent measure of overall mobility limitation. For the purposes of the survey, a person's self-definition of mobility limitation was accepted.

The SML make very few trips. 71% of survey respondents made no trip at all in the 48 hours prior to their interview. The SML average trip rate during the period of the survey was 0.43 one way trips per day per person. This compares with 1.13 trips per day for the moderately mobility limited and 2.26 trips per day for the general population. Chicago's 31,000 SML make approximately 13,000 one-way trips per day.

A large portion of the mobility limited respondents, 42%, said they never use the CTA. However, an estimated 30% of the 106,200 trips made by mobility limited persons are taken on the CTA, accounting for approximately 31,900 trips per day. Included in this number are 1,500 trips taken by the SML, an estimated 11.2% of approximately 13,000 trips per day.

An analysis of the actual trips made in the 48 hours prior to the interview shows that a very large proportion of all trips, 61.8%, were made in an auto or van with the mobility limited person as driver or passenger. Another 4.2% of all trips were made in taxicabs.

The SML are more heavily auto dependent than the total mobility limited population. 72.3% of all SML trips are made in an auto or van, with another 9.4% of all rides made in taxicabs. The combined percentages total 81.7% of all SML rides, for an estimated 25,800 daily auto and taxi rides.

SML respondents were asked about alternative modes of public transit. The following table is arranged in order of increasing ease of access.

PERCEIVED ABILITY TO USE ALTERNATIVE MODES

Mode	Use Easily	Use With Some Difficulty	Use With Great Difficulty	Cannot Use At All	Total
Regular CTA Bus	0.0%	0.0%	34.1%	65.9%	100%
Regular CTA Bus with lower steps and reserved seats	22.7%	25.5%	12.9%	36.4%	100%
Regular Bus with lift or ramp	30.8%	21.4%	8.3%	32.1%	100%
Door-to-door Bus service	32.8%	23.8%	11.1%	28.6%	100%
Door-to-door Bus Service with lift or ramp	49.3%	18.8%	7.4%	19.6%	100%

A regular CTA bus becomes usable to 48.2% of the SML population if it has lower steps and reserved seats for the handicapped.

The most appealing mode is the door-to-door bus service with a lift or ramp. However, even this most accessible type of service is perceived as unusable by almost 20% of the SML or about 5.5% of the entire mobility limited population.

The SML respondents were asked to identify the body area or system affected or impaired by their disability. "Other leg impairments" (other than leg missing or paralyzed) and "cardio-vascular disorders" accounted for the largest share of disorders mentioned as primary disabilities, totaling almost 50% of the SML. "Leg paralysis" and "skeletal-muscular disorders" account for another 22% of primary disabilities.

As a result of their disabilities, 81% of the SML use some special aid, such as a cane or a wheelchair. The most commonly used aid is a cane, accounting for 37.6% of SML. 18.4% use a wheelchair and an additional 14.0% use a walker. The estimated number of wheelchair users is approximately 5,700 SML persons.

The SML population is much older than the general population. 70% of SML persons are 60 years or older, with a median age of 71 years. One third of the SML are male and two thirds are female, with females over the age of 59 constituting 49.4% of the SML population.

95% of the SML are not employed. Of these, 64.2% are retired and 15.7% never were employed. Only 3.5% said their unemployment was transportation related. This represents approximately 1,086 persons city-wide.

As might be expected, income levels for the SML are very low. 39.7% made less than $4,000 in 1976 and 54% had incomes less than $5,000 per year.

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Chicago's Mobility-Limited Population | OP-x78231

DPW Survey Data | 9/18/78

	Mobility-Limited	Severely Mobility-Limited
Population	113,000	31,000*
Percentage of total population of Chicago**	3.55%	0.97%
Trips/day	106,200	13,600
Trips/person/day	.94	.44
Percentage of all trips compared to originating CTA weekday riders	9.2%	1.2%
Number of trips made on CTA by handicapped	31,900	1,500
Percentage of trips made on CTA	30%	11.2%
Transportation related to lack of employment	2,265	1,100
Percentage -- transportation related to lack of employment	2%	3.5%
Median age	63	71
Regularly drives or has access to auto	66%	68.5%
Percentage that have great difficulty or cannot use cab	9.1%	12%
Number who have great difficulty or cannot use cabs	10,300	3,700
Special services is primary mode of transportation	1.6%	-
Percent that live three blocks or less from bus or rapid transit stop	81.7%	83.3%
Percent that live more than three blocks from bus or rapid transit stop	17.3%	16.7%
Percent that cannot use door-to-door service with lifts or ramps	5.8%	-

* Approximately 5,700 persons, 18.4% of the severely mobility-limited population, or 0.1775% of the total population is wheelchairbound.

**Estimated population of Chicago--3.2 million.

Definition: Mobility-limited is a broad definition for persons who have some difficulty using a CTA bus. Severely mobility-limited persons are defined as persons who have great difficulty or cannot use a CTA bus.

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No restrictions on the number of rides.

Introduction

Federal 504 regulations require that by July, 1982, the equivalent of 2% of Section 5 funds be spent on provision of "interim" service until the fixed facilities and vehicles meet the "program accessibility" requirements established in the 504 regulations.

The 504 rules further stipulate, "interim accessible transportation shall be available within the recipient's normal service area and during normal service hours and, to the extent feasible (emphasis added), meet the following requirements: there shall be no restrictions on trip purposes; combined wait and travel time, transfer frequency, and fares shall be comparable to that of the regular fixed-route system; service shall be available to all handicapped persons who could otherwise use the system if it had been made accessible, including wheelchair users who cannot transfer from a wheelchair and those who use powered wheelchairs; and there shall be no waiting list such that handicapped persons who have qualified or registered for the service are consistently excluded from that service by virtue of low capacity."

The CTA's first action toward meeting the interim service requirement was CTA Board approval of the purchase of 20 small air-conditioned lift-equipped diesel powered vehicles for $1.5 million. CTA expects delivery of these buses in the Spring/Summer of 1981. Operations should start shortly afterwards.

CTA Initial Interim Service Plan

When CTA initiates special service in 1981, it plans on providing service with the following characteristics.

Area:	City-wide; CTA will operate this service throughout the City of Chicago.
Driver Assistance:	Door-to-door.
Fares:	Adult CTA fare.
Reservations:	24-hour advance notice. CTA will attempt to reduce the advance notice requirement as funding, operating experience and vehicle expansion permit.
Subscription:	First-come, first-serve basis; no more than 50% service will be subscription.
Trip Purposes:	No restrictions.
Trip Limitations:	No restrictions on the number of rides.

Eligibility: To be determined. During the first phase of this service, eligibility will be limited to persons unable to use CTA now. It is estimated that 58.8% of this group are elderly. The certification process itself will be developed shortly. As funding and vehicle purchase permit, the eligibility will be expanded to persons who have great difficulty using CTA.

Presently, approximately 32,000 trips daily by handicapped persons are made on the CTA system. Most of these trips will continue to be made on the current CTA system.

Aides/Companions: One companion allowed (more if space permits).

Days of Service: 7 days per week.

Hours of Service: 6:30 AM to 9:30 PM, Monday thru Friday.
9:00 AM to 5:00 PM, Saturday, Sunday, and holidays

The 504 regulations require that the hours of service for an interim service be comparable to regular CTA service. An expansion of the service in 1982 will provide around-the-clock operation. During owl periods, the number of buses operated will be less than during rush hours.

Training: Sensitivity training for all drivers.

Dispatching: Buses will be radio-equipped.

Dispatch Site: Limits garage--or other site as determined in the future.

Service Operation

CTA's dial-a-ride service will provide neighborhood (local) service. It will also provide feeder service to buses used in the "fast-link" express service. Eight zones will be created (boundaries to be used for operating purposes only) within the City of Chicago. Some vehicles will also be used in the "fast-link" express line-haul service, leaving the outer zones on a regularly scheduled basis to provide express service to the central area (Loop, North Michigan Avenue area, West Side Medical Center, and Circle Campus), dropping off passengers at their central area destination or transferring them to another "fast-link" express bus. Some passengers going from one zone to another will be dropped off enroute, at predesignated transfer locations. At the discretion of the dispatcher, the local and feeder buses may be dispatched downtown to eliminate transfers, reduce travel time, and/or maximize vehicle productivity. At that time, the outbound "fast-link" express buses would be exchanged to become the local and feeder bus within a zone. Small bus reliability is generally poor, so it is anticipated that on an average day, no more than 15 buses will be available.

Initially, the small buses used in the "fast-link" express mode will be scheduled to go to the CBD approximately every two hours. They will operate primarily via Chicago's expressways and Lake Shore Drive. Exact routing of these buses is being developed. The actual schedule will be determined on the basis of equipment availability and running time. The schedule will be modified and improved on the basis of demand, and also at the time of delivery of additional buses in 1982.

It is expected that many minor service modifications will be made during the initial year of operations to better serve our new passengers. Major modifications will be made at the time of delivery of the second order of 20 small buses.

CTA is studying the possibility of retrofitting and rehabilitating some regular-fixed some regular fixed-route 35 foot long buses with lifts to supplement the fleet. These could be used in the "fast-link" express line-haul segment of the service. This would increase the number of buses to 19-20 on a typical day. Currently, one bus is being retrofitted in the South Shops. More vehicles will be retrofitted if the experiment is successful.

CTA believes that a dial-a-ride service operated with a "fast-link" express component will provide handicapped riders with a service comparable to regular CTA services. A survey completed by the City of Chicago Department of Public Works indicates most trips made by the severely mobility limited are comparatively short (approximately 4 miles). Therefore, the buses assigned to local and feeder services will provide the majority of trips. With implementation of this service, every effort will be made to meet as many as possible of the service standards recommended to the Authority by the Mobility Limited Advisory Committee.

The actual number of trips provided by this service is unknown at this time. Vehicle productivity per hour for dial-a-ride vehicles is very low, based on service usage now being provided in other cities.

Interim Service - Compliance

The next phase of CTA's special service will be the purchase of an additional 20 small lift-equipped vehicles in 1981, pending approval of a grant by the Urban Mass Transportation Administration and the Illinois Department of Transportation.

CTA's special service will need to be expanded by July, 1982, when the Section 504 Interim Service requirements become effective. The budget for CTA's full interim service will be in excess of the Section 504 requirement that the equivalent of at least 2% of the region's Section 5 funds be spent on interim service. Approximately 500 hours of service per week can be provided for each one million dollars spent.

The transition plans for the City of Chicago and suburban areas propose that demand-responsive services be operated throughout the Chicago area. To insure that riders desiring to make trips from suburban areas to Chicago, from suburban area to suburban area, and from Chicago to suburban areas, it is recommended that the following areas be investigated:

a) A CTA transfer for acceptance by carriers in adjacent areas similar to CTA/RTA universal transfer arrangement.

b) A standardized procedure for call referrals by CTA.

c) Analysis to determine when transfers from operator to operator should be made, e.g. when should suburban operators drop off their passengers with destinations in Chicago, and/or when would transfers be made to the closest outlying accessible CTA station or route.

The CTA will fully cooperate with the Chicago Area Transportation Study in its efforts to coordinate private and social service agency transportation and any special requests from these organizations.

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...ice and to the "fast-link" express bus routes. For a discussion of

Introduction

CTA recommends the adoption of an alternative compliance plan to provide transportation services to those persons who cannot use, or have difficulty using the public transportation system as it exists.

The proposed plan consists of four major elements:

1) Operation of a lift-equipped dial-a-ride bus service;

2) Selected accessible rapid transit stations;

3) Operation of certain "fast-link" express bus routes;

4) Operation of a circulation and distribution service in the Central Business District, near North and near West sides.

The proposed alternative compliance plan is multi-modal and each element should be viewed within the context of a transportation system rather than as individual services. A multi-modal plan was developed to reduce travel time for the handicapped, to make it comparable to the current public transportation system, to integrate the handicapped into the "mainstream", and provide effective transportation.

The dial-a-ride bus service would accommodate the majority of short-distance trips and would feed passengers into either accessible rapid transit stations or "fast-link" express bus routes for long-distance trips (see map). Upon reaching the accessible rapid transit station (or "fast-link" express bus stop) nearest their destination, passengers would transfer back to the dial-a-ride bus service (if necessary), or to the CBD circulation service for the completion of their journey. This multi-modal approach is similar to the system used by regular riders, except that vehicles would be tailored to meet the special needs of the handicapped.

Dial-a-Ride Bus Service

The dial-a-ride bus service would play a key role within the plan. Its primary mode of operation would be on a demand-responsive basis, i.e. trips would be provided in accordance with requests for service as they occur, and on a reservation (advance notice) basis.

The dial-a-ride service would consist of a fleet of small buses (15 passengers) that are equipped with wheelchair lifts. These buses would operate throughout the City of Chicago and would accommodate short-distance trips as well as act as a feeder to the accessible rapid transit stations and to the "fast-link" express bus routes.

Each of the accessible rapid transit stations would be a focal point for the operation of the dial-a-ride service. In addition to these, accessible intermodal transfer centers would be developed at several locations, such as shopping centers and hospital complexes, to act as the transfer points between vehicles of the dial-a-ride service and to the "fast-link" express bus routes. For a discussion of

service standards for the dial-a-ride service, see OP-x80205.

CTA estimates that the dial-a-ride bus service would require the use of 40 to 70 vehicles with an estimated operating cost of $5,550,000 to $9,745,000 annually, depending upon actual vehicle productivity. Approximately 2,100 daily trips or 630,000 trips annually would be provided on this service (see OP-x80201).

Rapid Transit Stations

As a component of the plan, CTA proposes that approximately 25 to 30 stations be made accessible to serve as the community focal points for the collection and distribution of passengers, and as accessible "gateways" to the rapid transit system for long-distance trips (see attached list of key stations). These stations are or would be made accessible to the handicapped during a ten-year program period. Two of the stations are already completed, 7 are under construction or are being designed, and 4 will be built for the O'Hare Rapid Transit Extension. It is proposed that 16 stations (includes the O'Hare Extension stations) be made accessible in the first 5 years of the program period, and that the remaining stations be completed in the second five years.

Cost for accessibility modifications at these stations is estimated at approximately $38 million (see attached OP-x80207).

Rapid Transit Cars

CTA's newest rail cars (200 2400-series cars) are equipped with wide sliding doors that allow entry by wheelchairs. CTA presently has another 300 of these rail cars on order, with an option to purchase an additional 300. Delivery of these cars will begin in 1981. CTA would assign and schedule as many accessible trains per route as is possible. Additional vehicles with wide sliding doors would be acquired as part of the regular vehicle replacement program to replace remaining non-accessible cars.

Fast-link Express Bus Routes

In radial corridors without rail rapid transit service, and potentially in other highly-traveled corridors, a system of "fast-link" express bus routes would be implemented. These routes would utilize lift-equipped full size or small transit buses operating on a fixed schedule with limited stops. Frequency of service would be adjusted according to actual demand.

As an example of this service, the Archer Avenue corridor would have a "fast-link" express bus route which would originate at the Ford City Shopping Center, make a limited number of stops, such as at Midway Airport, Archer and Cicero, etc., and would serve an intermodal transfer point to be developed in the Loop, adjacent to an accessible rapid transit station.

Central Business District Circulation and Distribution Service

To provide for ready access to a maximum number of points within the Central Business District, near North, and near West sides, a circulation and distribution service utilizing accessible small buses would be implemented. This service would operate in a combination of the scheduled and demand-responsive modes. Sufficient service would be provided to accommodate such demand as develops.

Fixed-route Buses

CTA is acquiring 125 lift-equipped articulated buses which will be placed in regular service in the Archer, Jeffery, and Lake Shore Drive corridors. These vehicles may be used to supplement or replace various sections of the "fast-link" express bus service. In such cases, public information materials including lift-equipped trips would be prepared and disseminated.

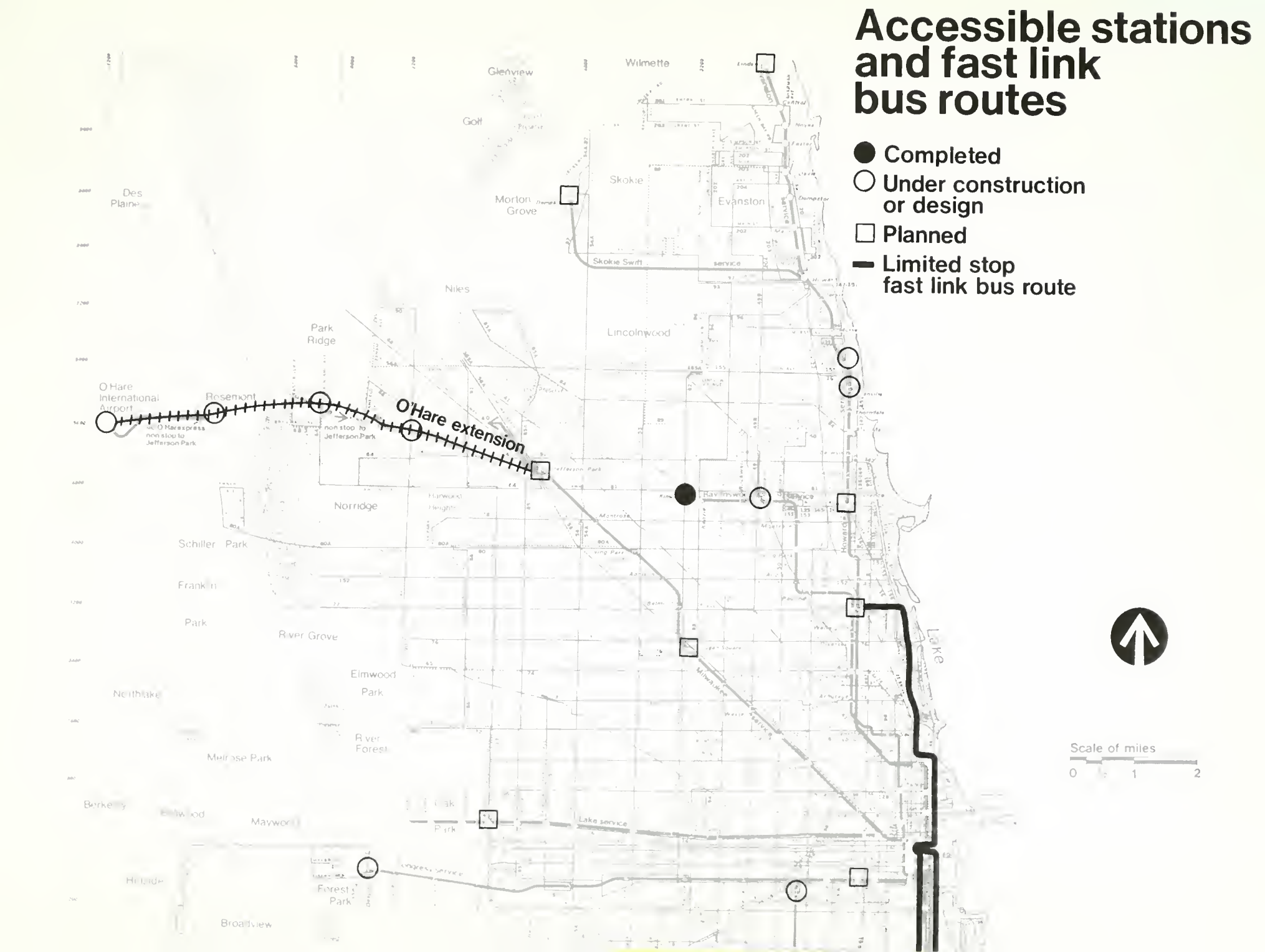
CTA will purchase lift-equipped buses thru FY 1987 when one half of the fleet will be accessible. The added capital costs for making one half the fleet accessible is approximately $22.2 million and the added operating cost to maintain the lifts is estimated to be $1.2 to $3.8 million.

If the entire CTA bus fleet is to be equipped with lifts, then additional capital costs over the 12 year bus replacement program is estimated to be $44.5 million. Additional operating costs associated with the maintenance of wheelchair lifts are estimated to be in the range from $2,445,000 to $7,635,000 annually (see OP-x80204).

"Non-key" Rapid Transit Stations

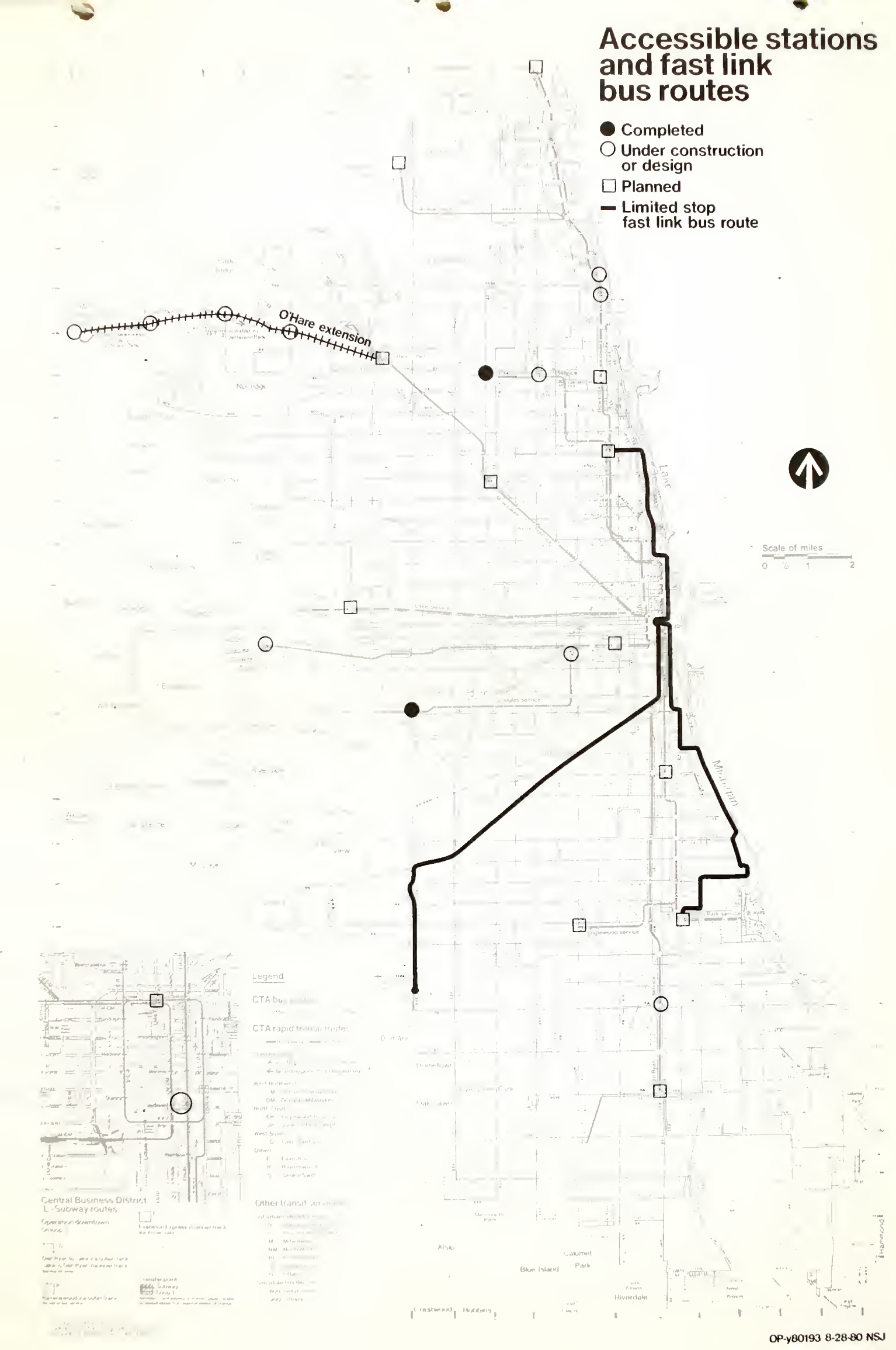
In the plan, there are 111 "non-key" stations. These stations would be made accessible to handicapped persons that can use steps when they are remodeled, modernized, or replaced. This would make CTA's rapid transit system easier to use for the 30,000 handicapped persons that now use CTA (see OP-x80206).

Accessible stations and fast link bus routes

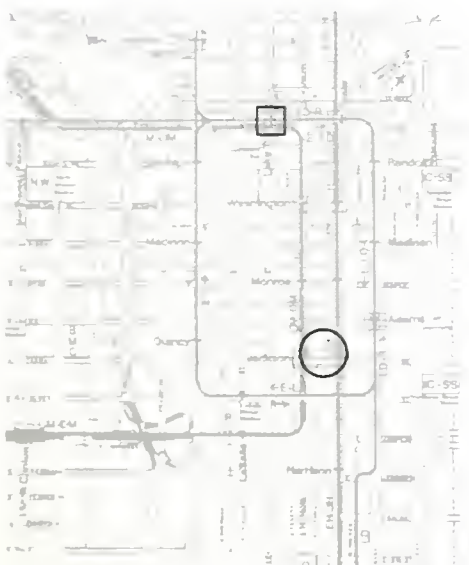


Accessible stations and fast link bus routes

- ● Completed
- ○ Under construction or design
- □ Planned
- — Limited stop fast link bus route



OP-y80193 8-28-80 NSJ



Central Business District
'L'-Subway routes

Operation downtown
On loop 'L'

E
Evanston Express via inner track

LD
Dan Ryan to Lake via outer track
Lake to Dan Ryan via inner track

R
Ravenswood via outer track

Transfer point
Subway
Loop 'L'

Legend

CTA bus routes

CTA rapid transit routes

Other transit services

Suburban railroad stations
B Burlington Northern
C Chicago & North Western
M Milwaukee
NW North Western
RI Rock Island
SS South Shore
O Others

Suburban bus depots
800 Greyhound
900 Others

Michigan

Park service

Englewood service

Ryan

Blue Island

Calumet Park

Riverdale

Alsip

Robbins

Hammond

OP-y80193 8-28-80 NSJ

Ridership Estimates

In developing estimates for the potential market for dial-a-ride bus service for the severely mobility limited (SML), or those persons who cannot use, or have great difficulty using the public transportation system as it exists in the City of Chicago, we have relied on data contained in the City of Chicago Department of Public Works report, "A Survey of Mobility Limited Persons".[1] Some of the key characteristics of the severely mobility limited population as stated in the survey are:

- The SML population in the City of Chicago is 31,000 persons;
- SML persons make an average of .43 trips per day on all modes;
- The current percentage of SML trips taken on CTA is 11.2%;
- 58.3% of the SML said that they would use public transportation more often if door-to-door service is provided;
- 31% of the SML are unable to use cabs.

Although 58.3% of SML persons interviewed said that they would use transit more often if door-to-door service is provided, we expect that increases in SML trip rates and transit market share will be somewhat less than this number would tend to indicate. However, it is reasonable to expect that trip rates will increase somewhat, from .43 trips/day to about .50 trips/day, and that the CTA market share of SML trips will increase to about 20%+, due to the availability of a CTA dial-a-ride service, which is not presently offered, combined with continued usage of the regular CTA system.

The estimated potential market to be served by the dial-a-ride service is 731,100 SML trips annually. A summary of the ridership calculation is shown below.

31,000	SML population
x .50	SML trips/person/day
15,500	Total SML trips/day
x .15	Market share (CTA special service)
2,325	SML transit trips/day (CTA special service)
x 300	Annualization
697,500	SML transit trips/year (CTA special service)

---

[1] The City of Chicago Department of Public Works, "A Survey of Mobility Limited Persons" (1978), is the report of a U.S. Department of Transportation-funded survey conducted by the University of Illinois Survey Research Laboratory in which 22,419 residences were contacted to identify households in which one or more persons are mobility-limited. In residences where a mobility-limited person was identified, an indepth interview was conducted. In all, 2,269 persons out of the 63,915 persons living in the 22,419 households surveyed were found to be mobility-limited in some way. This report is the most complete and accurate source on characteristics of the mobility-limited population in the City of Chicago that is available at this time. For this reason, the report is used as the sole reference on the travel characteristics of the mobility limited.

Operating Cost

Operating cost estimates for the dial-a-ride service are based on the average cost of a vehicle mile and the total cost of one operator hour. Current operating cost per vehicle mile on the CTA bus system is $1.896, excluding direct labor costs. Based on March, 1980 hourly wage rates, the cost of one operator hour is $16.381, including overhead.

It is estimated that the vehicles used in this operation will average 12 miles per hour. Therefore, total cost for one vehicle hour of operation were calculated as follows:

$1.896	Cost per vehicle mile
x 12	Average mileage per vehicle hour
22.75	Mileage cost
+16.38	Hourly wage rate
39.13	Cost per vehicle hour

Since wage rates escalate, total operating cost per vehicle hour was rounded up and estimated at $40 per vehicle hour. This estimate could be low due to unknown support service costs such as trip dispatchers.

Vehicle Requirements

Vehicle requirements are based on demand estimates and vehicle productivity estimates. Two vehicle requirement need estimates were prepared by CTA based on assumed vehicle productivity rates of three and five trips per vehicle hour. The assumed vehicle productivity rates used for estimation purposes is supported by the experience of other U.S. cities which reported vehicle productivity rates from three to five trips per vehicle hour. The mean of all systems reporting was 3.65 trips per vehicle hour. Vehicle requirements were also based on the assumption that 80% of demand will occur in an 11 hour period between 7:00 A.M. and 6:00 P.M.

Presently, 74% of current demand on the CTA bus system occurs during the 11 hour period from 7:00 A.M. to 6:00 P.M. The "peaking" observed during this period is directly attributable to daily journeys to and from work and/or school. A very low percentage of the SML are employed or attend school (4% are employed full or part time, and about 90% are either retired or have never been employed; less than 1% of the SML are of school age), and only 3.5% of the SML who are unemployed stated that their work status is transportation-related.

The methodology used to calculate vehicles required is:

2,325	Estimated daily demand
x .80	Percentage of demand in 11 hour period
1,860	11 hour demand
÷ 11	Number of hours
169	Trips per hour
÷ 5	Vehicle productivity
34	Vehicles
+ 20%	Spares
41	Total number of vehicles required

While the spare ratio at CTA for full sized transit buses is approximately 9.7%, a higher spare ratio (20%) was used for small buses due to their general unreliability.

Various vehicle requirement estimates were calculated by use of several levels of trip rates. The variation in vehicles required and the annual operating costs for the probable 15% market share in Chicago is shown below.

15% Market Share	.43 trips/day/SML		.50 trips/day/SML	
	3 trips per vehicle hour	5 trips per vehicle hour	3 trips per vehicle hour	5 trips per vehicle hour
Daily Riders	2000	2000	2325	2325
Vehicles Required	61	37	71	43
Annual Operating Cost - $40 per hour	$7,998,000	$4,800,000	$9,298,000	$5,580,000

Depending on funding and actual operating experience, the levels of trip rates and market shares will be adjusted as required.

Service Standards

It is planned that the dial-a-ride component of the local option plan will be a radio-dispatched city-wide door-to-door service, operating with no restrictions as to trip purpose, hours of service, days of service, or number of rides that can be taken. One companion per traveler would be allowed on the small buses (more if space permits). All drivers will receive sensitivity training and all passengers and companions will be charged an adult CTA fare.

CTA will start operation of this system with 20 small buses in 1981 on a restricted schedule with a 24-hour reservation required (see CTA's Interim Service Plan). The days and hours of service will be expanded with the purchase of additional vehicles. CTA also plans on reducing the trip reservation requirement from 24 hours to one or two hours when equipment, operating experience, and funding allow it. CTA believes that the integrated service approach of the plan will greatly minimize travel time due to its reliance on the rapid transit system and fast-link express service.

During the first phase of this project, the target market will be handicapped persons unable to use CTA current service. The eligibility will also be expanded with the purchase of additional vehicles to include handicapped persons who have great difficulty using transit service today. There are approximately 20,000 handicapped persons unable to use transit and approximately 13,000 who can only use transit with great difficulty.

Chicago Transit Authority
General Operations Division
Operations Planning Department
Routes/Systems

Alternative Compliance Plan	OP-x80207
Accessible Key Stations	9/12/80

Station	Route	Total Costs
Linden	Evanston	$ 123,121
Dempster	Skokie	188,177
O'Hare International Airport	West-Northwest	O'Hare Extension
River Road		
Cumberland		
Harlem		
Jefferson Park	West-Northwest	1,284,410
Logan Square	West-Northwest	2,035,856
Jackson	West-Northwest	2,987,156
Clark/Lake	Loop	1,573,150
Kimball	Ravenswood	Completed
Western	Ravenswood	Under Construction
Wilson	North-South	1,744,653
Loyola	North-South	Under Construction
Granville	North-South	Under Construction
Tech-35th	North-South	799,370
Englewood-Ashland	North-South	994,573
Belmont	North-South	8,094,398
Jackson	North-South	Programmed
63rd-Calumet	North-South	9,000,000
Desplaines	Congress	136,492
Halsted-University of Illinois	Congress	2,791,427
Austin	West-South	1,598,282
79th-Dan Ryan	West-South	Under Construction
95th-Dan Ryan	West-South	1,778,794
Polk	Douglas	Programmed
Cicero	Douglas	Completed
Lake Transfer	West-Northwest	2,848,938
TOTAL OF 28 STATIONS	TOTAL	$37,978,797

JV:ml

Chicago Transit Authority
General Operations Division
Operations Planning Department
Routes/Systems

Non-key Stations

In the alternative compliance plan there are 111 non-key stations. Many of these stations require modifications to make them more easily accessible to step-users. These modifications include telephone height modifications, lighting, stairway, handrail, fare control and signage modifications.

Cost

The total estimated cost in 1979 dollars of these modifications was estimated in the 321 Study at approximately $12 million without tactile pathways and beepers for the blind, and $30,132,000 with tactile pathways and beepers. Following the 321 Study, it was determined that the current ramps on the Congress line do not meet ANSI code (are not accessible to wheelchair users and handicapped persons that can use steps). If replaced, the estimated modification cost will increase by approximately $12 million.

Schedule

Due to the extraordinary cost of making the 111 non-key stations accessible to step-users and the anticipated limited funding available for transit improvements in the region, CTA will make improvements to non-key stations only when general station remodeling is undertaken rather than on a fixed timetable. Many improvements (programs) that benefit all CTA riders as well as the handicapped are being made, and will continue to be made. For example, CTA will soon complete the installation of loudspeakers at all rapid transit stations, and several station lighting improvement projects are also being completed. These two projects benefit all CTA passengers, but specially benefit hearing and visually impaired persons.

JHR:ml

The addition of elevators to rapid transit stations will increase the annual operating costs of the CTA. Added operating costs will result from the need to operate, inspect, and maintain the elevators. Actual operating experience at New York City Transit Authority shows that each elevator costs an average of $20,000 a year to operate.

The following is a list of elevator operating costs per station for the alternative compliance plan.

Station	Route	Number of Elevators	Annual Operating Cost
Linden	Evanston	0	$ -
Dempster	Skokie	0	-
O'Hare International Airport		3	60,000
River Road	West-Northwest	1	20,000
Cumberland		3	60,000
Harlem		1	20,000
Jefferson Park	West-Northwest	1	20,000
Logan Square	West-Northwest	2	40,000
Jackson	West-Northwest	2	40,000
Clark/Lake	Loop	4	80,000
Kimball	Ravenswood	0	-
Western	Ravenswood	2	40,000
Wilson	North-South	1	20,000
Loyola	North-South	1	20,000
Granville	North-South	1	20,000
Tech-35th	North-South	1	20,000
Englewood-Ashland	North-South	1	20,000
Belmont	North-South	2	40,000
Jackson	North-South	2	40,000
63rd-Calumet	North-South	3	60,000
Desplaines	Congress	1	20,000
Halsted-University of Illinois	Congress	1	20,000
Austin	West-South	1	20,000
79th-Dan Ryan	West-South	1	20,000
95th-Dan Ryan	West-South	2	40,000
Polk	Douglas	2	40,000
Cicero	Douglas	0	-
Lake Transfer	West-Northwest	2	40,000
TOTAL OF 28 STATIONS		41*	
	TOTAL ANNUAL OPERATING COST		$820,000

*Actual number of elevators may vary, based on final design.

F

G

H

I

J

...n

...pleted or
...or the

.../North-South
...nville/North-South
...Polk/West-Northwest
Jackson/North-South (incl.
Jackson/West-Northwest)

...a 12-year overall station modernization
...ions in Phase I to be completed within five years
...be completed within 12 years of program inception.

The 504 Regulations require that all "key" stations be made fully accessible to the handicapped, including wheelchair users, in a 30-year program. The Chicago Transit Authority has determined that 71 stations out of 140 come under this category. "Key" stations are defined as:

a) Stations where passenger boardings exceed average station boardings by at least 15 percent.

b) Transfer points on a rail line or between rail lines, e.g., Fullerton.

c) Major interchange points with other transportation modes, e.g., Jefferson Park.

d) Terminal stations, unless a terminal station is close to another accessible station.

e) Stations serving major activity centers of the following types: employment and government centers, institutions of higher learning, and hospitals or other health care facilities.

The balance of the stations are defined as "non-key" and are to be made accessible to handicapped persons who are capable of using steps. The program prepared herein outlines the scope, schedule and budget to implement these requirements.

Under our present modernization program, the Authority has completed or will soon complete nine stations which will be fully accessible for the handicapped and are as follows:

Desplaines/Congress
Cicero/Douglas
79th/Dan Ryan
Kimball/Ravenswood
Western/Ravenswood
Loyola/North-South
Granville/North-South
Polk/West-Northwest
Jackson/North-South (incl. Jackson/West-Northwest)

The Authority has further developed a 12-year overall station modernization program. This includes 12 stations in Phase I to be completed within five years and 14 additional stations to be completed within 12 years of program inception.

FULL COMPLIANCE PROGRAM

The Full Compliance requirement of full accessibility of 1/3 of the key stations will be achieved under the above 12-year overall station modernization program.

This proposed program for Full Compliance stations is divided in two major categories: Category I - those stations that will comply with the full accessibility for the handicapped if required; Category II - the balance of the stations which will meet possible requirements for limited accessibility. Differentiation between full and limited accessibility standards is dependent on inclusion of those elements necessary to facilitate the transfer of wheelchair-borne passengers. For the purposes of estimating, the budget indicated herein has been extracted from the UMTA sponsored 321 Study and is based on 1979 dollars. It is presumed that these estimates are adequate to implement this program.

Category I

Category I includes 71 of the present 140 stations on the Rapid Transit System. Eight of this group have been completed or will soon be completed as indicated above. This program will include the balance of these stations required for compliance for full accessibility and current standards and codes. For the purposes of scheduling, this group has been subdivided in three construction phases.

Phase I will include 12 stations and will be completed within five years of the inception of this program with an estimated budget of $29,700,000, (not including cost of Clark and Lake). This includes a proposed new station at 63rd and Calumet to replace other facilities on the Jackson Park Branch.

Phase II will include 10 additional stations and will be completed within 12 years of the inception of this program with an estimated budget of $54,000,000.

Phase III will include the balance of 41 stations to be completed within 30 years of inception of this program with an estimated cost of $111,400,000.

The total estimated budget for the 30-year program is $195,100,000. Factors considered for the selection of the stations in the above category included the relationship to existing accessible stations, intermodel transfer, geographic distribution and criteria established by UMTA for "key" stations. The proposed schedule and budgets for Phase I are illustrated on Exhibit "A". The criteria for selection of stations is graphically illustrated on Exhibit "B".

Category II

Category II of this Rapid Transit Station Modernization Program will meet the requirements for accessibility for the limited mobility passengers. There are 66 stations included in this category and are listed in the attachments. Modifications to these stations will include removal of architectural barriers, accessibility through the fare controls, stairs or ramps that meet the regulations and all other requirements that will provide an accessible pathway for those passengers who can use steps. The estimated budget for this work is $25,000,000.

The proposed budget for this category has been extracted from the UMTA sponsored 321 Study and is based on 1979 dollars. In reviewing the 321 Study estimates, we have concluded that we must make an exception to these estimates prepared for five stations on the Congress Route, which currently have ramps leading to the platforms. It is our interpretation of the Federal Regulations defining ramp requirements that the present ramps do not comply and must be restructured to provide accessibility for limited mobility passengers. We have, therefore, added additional funds to the basic study for the demolition of these ramps and the construction of new stairs to meet the compliance requirements.

It will be extremely difficult to complete this program within the specified 3-year period due to funding limitations, engineering requirements, and phasing of actual construction. Because of extraordinarily expensive structural changes, we propose to accomplish this work over a 30-year period with 1/3 of the stations completed within the first 12 years.

In order for this Modernization Program to be successful and reduce the risk of delay or duplicity in effort, it is imperative that the governing regulations be explicit in their requirements. There are numerous documents and regulations presently published by various agencies that conflict in the details required and, in fact, have omissions as related to rapid transit facilities. We, therefore, request that as an initial step that we be advised by the funding agencies as to which regulations will apply for this Modernization Program.

Other Improvements

During this 30-year Station Program, numerous other improvements will be required to maintain passenger convenience, comfort and safety. These will include structural, platform and canopy repairs, escalator and elevator modernization, shelters and passenger heating, graphics and fare collection equipment, agents' booths, lighting, communications and other improvements. These will be developed separately.

FULL ACCESSIBILITY PROGRAM

Category I

Phase I

Wilson (NS)
35th/Tech (NS)
63rd/Calumet (NS)
63rd/Ashland (NS)
Logan Square (WNW)
Lake Transfer (WNW)

Jackson (WNW) (incl. Jackson/NS)
U. of I./Halsted (WNW)
Austin (WS)
Linden (Evanston)
95th (WS)
Clark/Lake (WS) (in conjunction with State of Illinois Building)

Phase II

Howard (NS)
Belmont (NS)
Fullerton (NS)
Washington (NS)

Jefferson Park (WNW)
Damen (WNW)
Washington (WNW)
Harlem (WS)
Main (Evanston)
Dempster (Swift)

Phase III

North/South

Morse
Bryn Mawr
North/Clybourn
Clark/Division
Chicago/State
Grand/State
Monroe
Roosevelt
51st
Jackson Park*
Harvard

West/Northwest

Irving Park/Pulaski
Division/Ashland
Chicago
Grand
Monroe
Clinton/Congress
Racine

West/Northwest

Medical Center/Ogden
Cicero
Harlem
California/Douglas
Cicero/Berwyn

West/South

Clinton/NW Passage
Cermak/Chinatown
69th
87th
Ashland

Ravenswood

Damen
Wellington
Merchandise Mart

Loop

Randolph/Wells
Madison/Wells
Quincy/Wells
LaSalle/Van Buren
Adams/Wabash
Madison/Wabash
Randolph/Wabash
State/Lake

Evanston

Central
Foster
Davis

*May be replaced by proposed new station at 63rd and Calumet.

FULL ACCESSIBILITY PROGRAM

Category II

NORTH-SOUTH

Jarvis
Granville
Thorndale
Berwyn
Argyle
Lawrence
Sheridan
Addison
Harrison
Indiana
43rd
47th
55th
58th
61st
King Drive *
Cottage Grove *
University *
Wentworth
Halsted
Racine

WEST/NORTHWEST

Montrose
Addison
Belmont/Kimball
California (Milw.)
Western (Milw.)
LaSalle/Congress
Western (Douglas)
Kedzie
Pulaski (Douglas)
Austin
Oak Park
18th
Hoyne
Western (Congress)
Kedzie (Congress)
Central Park
Pulaski (Congress)
Kildare
Laramie

WEST/SOUTH

Oak Park
Ridgeland
Central
Laramie
Cicero
Pulaski
Homan
Kedzie
California
Halsted
Sox-35th
47th
Garfield
63rd

RAVENSWOOD

Kedzie
Rockwell
Francisco
Montrose
Irving Park
Addison
Paulina/Lincoln
Southport
Diversey
Armitage
Sedgwick
Chicago

EVANSTON

Noyes
Dempster
South Boulevard

*May be replaced by proposed new station at 63rd and Calumet.

SCHEDULE

CTA R.T. STATION MODERNIZATION PROGRAM

FIVE YEAR PLAN - PHASE I

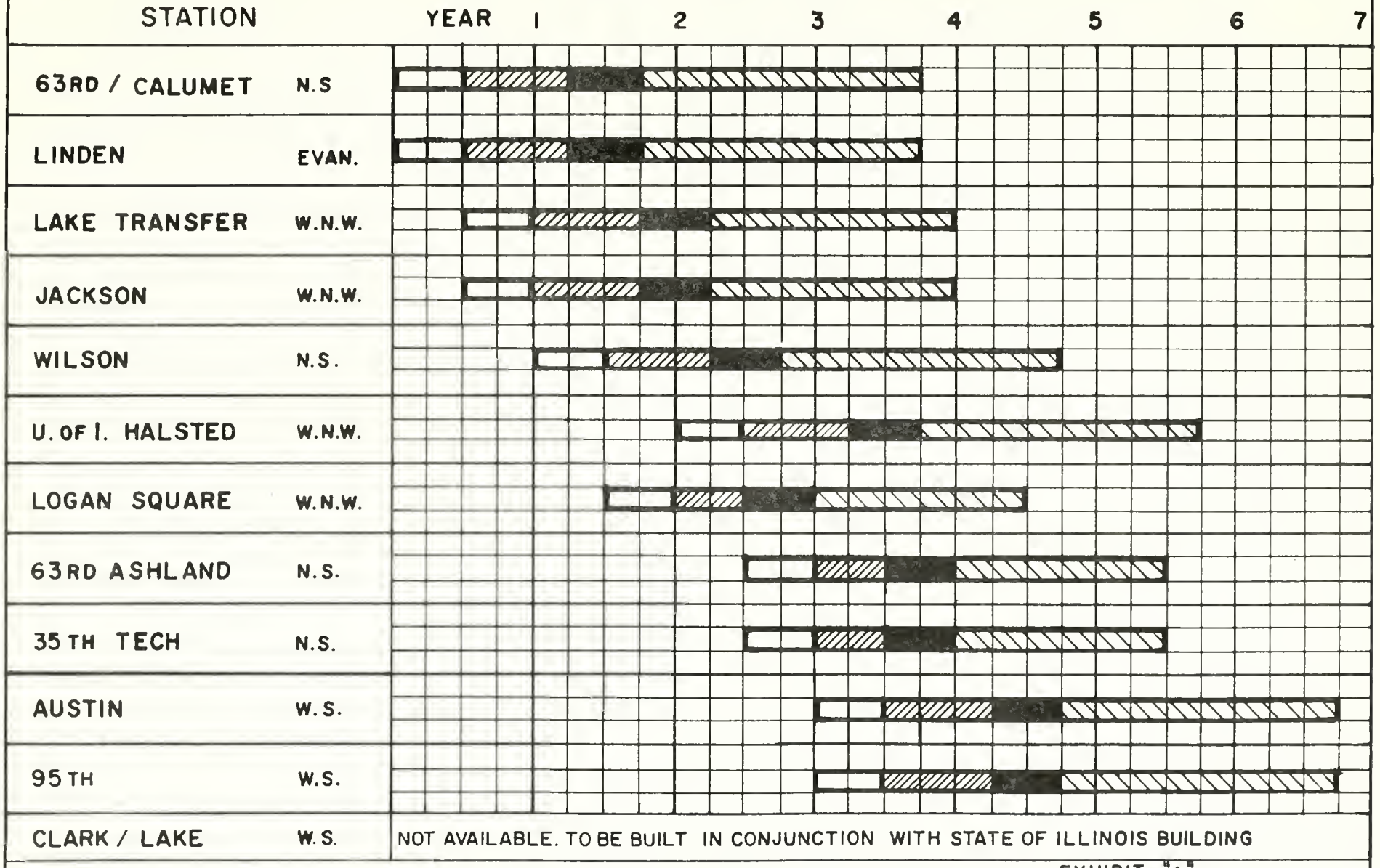


EXHIBIT "A"

C.G.K. J.F.U. W.E.L. AUG. 1980

SELECTION FACTORS AND ESTIMATED COST

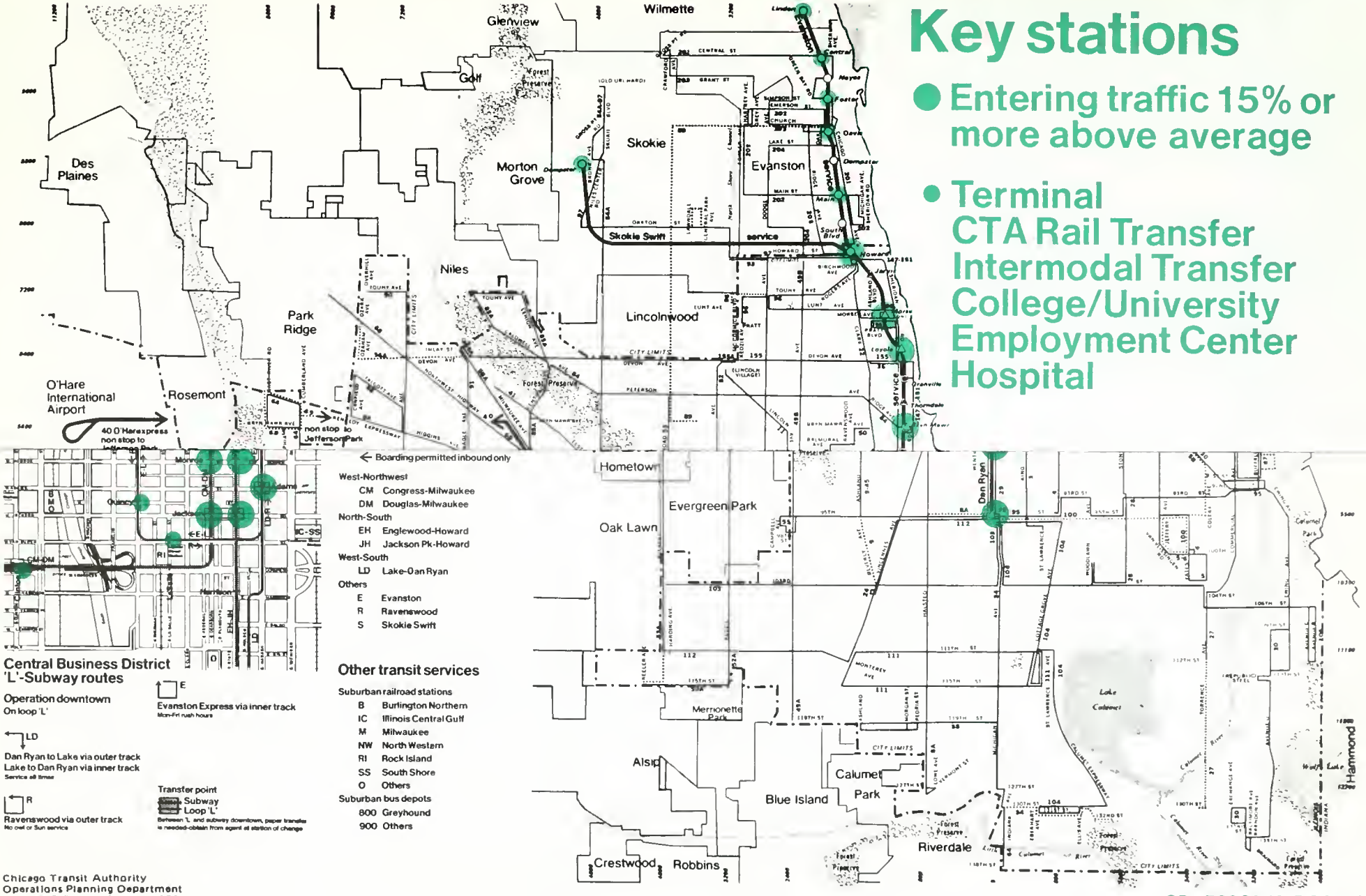
CTA R.T. STATION MODERNIZATION PROGRAM

FIVE YEAR PLAN - PHASE I

STATION		WEEKDAY ENTERING TRAFFIC (NOV.'79)	RANK IN TRAFFIC	15% ABOVE AVERAGE	TERMINAL	CTA RAIL TRANSFER	INTERMODEL TRANSFER	COLLEGE / UNIVERSITY	EMPLOYMENT CENTER	HOSPITAL	LAND PURCHASE REQ'D.	PARK-N-RIDE FACILITY	ESTIMATED COST 1. CTA EST. (I.S.T.) 2. CTA EST. 3. 321 STUDY EST.
63RD CALUMET	N.S.			●	●		●						9,000,000 [2]
LINDEN	EVAN.	2,850	62		●		●					●	1,555,000 [1]
LAKE TRANSFER	W.N.W.	12,450	6	●		●			●				1,573,150 [3]
JACKSON	W.N.W.	10,200	12	●		●			●				2,987,156 [3]
WILSON	N.S.	5,500	30	●				●		●			1,744,653 [3]
U. OF I. HALSTED	W.N.W.	8,250	18	●				●	●				2,791,427 [3]
LOGAN SQUARE	W.N.W.	7,350	22	●			●						2,035,856 [3]
63RD ASHLAND	N.S.	6,500	24	●	●		●					●	994,573 [3]
35TH TECH	N.S.	4,600	34	●				●					799,370 [3]
AUSTIN	W.S.	3,500	49				●						1,598,282 [3]
95TH	W.S.	25,750	1	●	●		●						1,778,800 [3]
CLARK / LAKE	W.S.	(23,200)	(3)	●		●	●		●				NOT AVAILABLE. TO BE BUILT IN CONJUNCTION WITH STATE OF ILL. BLDG.
										TOTAL			26,858,267

EXHIBIT "B"

C.G.K. W.E.L. AUG. 1980

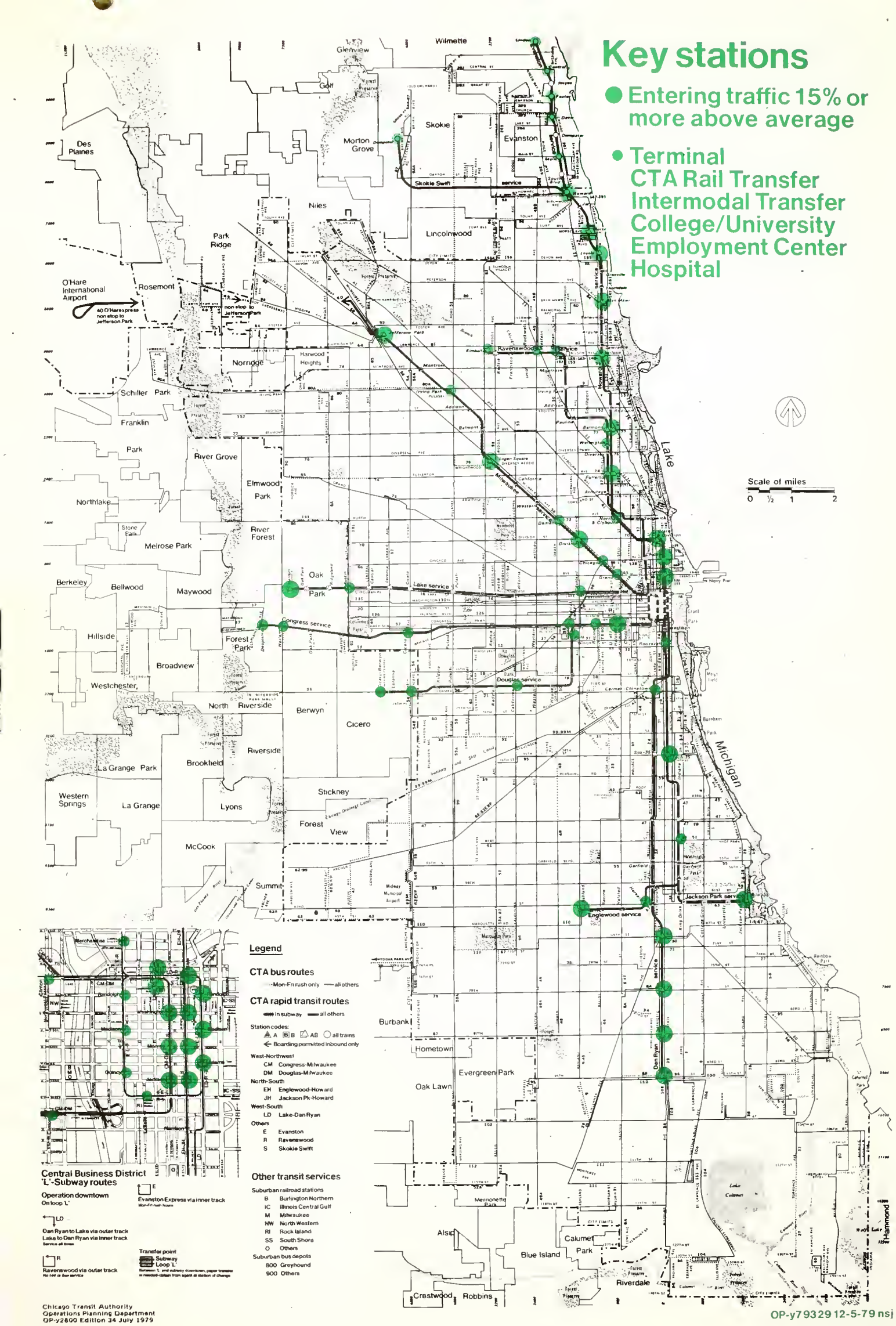


Key stations

- Entering traffic 15% or more above average
- Terminal
  CTA Rail Transfer
  Intermodal Transfer
  College/University
  Employment Center
  Hospital

Chicago Transit Authority
Operations Planning Department
OP-y2800 Edition 34 July 1979

OP-y79329 12-5-79 nsj



Chicago Transit Authority
Operations Planning Department
OP-y2800 Edition 34 July 1979

OP-y79329 12-5-79 nsj

Key stations
Defined per D.O.T.'s 504 regulations

Stations	Traffic[1]	Terminal[2]	CTA Rail Transfer[3]	Intermodal Transfer[4]	College/University[5]	Employment Center[6]	Hospital[7]
WEST-SOUTH ROUTE							
Lake							
Harlem	X	X		X			
Austin				X			X
Ashland							X
Clinton				X			
Dan Ryan							
Cermak-Chinatown				X			
69	X			X			
79	X						
87	X						
95	X	X		X			
WEST-NORTHWEST ROUTE							
Milwaukee							
Jefferson Park	X	X		X			
Irving Park				X			
Logan Square	X			X			
Damen				X			
Division	X			X			
Chicago				X			
Grand				X			
Dearborn Subway							
Lake Transfer	X		X			X	
Washington	X		X			X	
Monroe	X					X	
Jackson	X		X			X	
Congress							
Clinton (D)				X		X	
U of I/Halsted (D)	X				X	X	
Racine (D)				X			X
Medical Center				X	X		X
Cicero				X			
Harlem							X
Desplaines		X		X			
Douglas							
Polk							X
California							X
Cicero				X			
Cicero/Berwyn		X					
EVANSTON ROUTE							
Linden		X		X			
Central							X
Foster					X		
Davis				X			
Main				X			
SKOKIE SWIFT ROUTE							
Dempster		X		X			

Stations	Traffic[1]	Terminal[2]	CTA Rail Transfer[3]	Intermodal Transfer[4]	College/University[5]	Employment Center[6]	Hospital[7]
NORTH-SOUTH ROUTE							
North Side							
Howard (E,S)	X	X	X	X			
Morse	X						
Loyola	X			X	X		
Bryn Mawr	X						
Wilson	X				X		X
Belmont (R)	X		X				
Fullerton (R)	X		X	X			X
North/Clybourn				X			
Clark/Division	X			X			X
Chicago/State	X				X	X	X
Grand/State	X					X	
State Subway							
Washington	X		X			X	
Monroe	X				X	X	
Jackson	X		X		X	X	
South Side							
Roosevelt						X	
Tech-35	X				X		
51							X
Jackson Park							
Jackson Park	X	X		X			
Englewood							
Harvard							X
Ashland	X	X		X			
RAVENSWOOD ROUTE							
Kimball		X					
Western				X			
Damen							X
Wellington							X
Merchandise Mart (E)			X		X	X	
LOOP ELEVATED STATIONS							
Clark/Lake	X		X			X	
State/Lake	X		X		X	X	
Randolph/Wabash	X			X		X	
Madison/Wabash	X					X	
Adams/Wabash	X		X		X	X	
LaSalle/Van Buren				X		X	
Quincy/Wells						X	
Madison/Wells						X	
Randolph/Wells						X	

1 Passenger boardings 15% or more above average.
2 Stations at the end of each rail line.
3 Major transfer points between two or more CTA rail routes.
4 Stations which serve as transfer points between CTA rail and intercity or commuter rail, or which are served by three or more CTA, suburban, or intercity bus routes.
5 Stations within one-quarter mile of a major academic college or university (enrollment greater than 500).
6 Stations within one-half mile of major employment center.
7 Stations within one-quarter mile of a major hospital or health care facility (150 beds or more).

(D) - Douglas
(R) - Ravenswood
(E) - Evanston
(S) - Skokie

WMW:ml

Key stations
Defined per D.O.T.'s 504 regulations

Stations	Traffic[1]	Terminal[2]	CTA Rail Transfer[3]	Intermodal Transfer[4]	College/University[5]	Employment Center[6]	Hospital[7]
WEST-SOUTH ROUTE							
Lake							
Harlem	X	X		X			
Austin				X			X
Ashland							X
Clinton				X			
Dan Ryan							
Cermak-Chinatown				X			
69	X			X			
79	X						
87	X						
95	X	X		X			
WEST-NORTHWEST ROUTE							
Milwaukee							
Jefferson Park	X	X		X			
Irving Park				X			
Logan Square	X			X			
Damen				X			
Division	X			X			
Chicago				X			
Grand				X			
Dearborn Subway							
Lake Transfer	X		X			X	
Washington	X		X			X	
Monroe	X					X	
Jackson	X		X			X	

Stations	Traffic[1]	Terminal[2]	CTA Rail Transfer[3]	Intermodal Transfer[4]	College/University[5]	Employment Center[6]	Hospital[7]
NORTH-SOUTH ROUTE							
North Side							
Howard (E,S)	X	X	X	X			
Morse	X						
Loyola	X			X	X		
Bryn Mawr	X						
Wilson	X				X		X
Belmont (R)	X		X				
Fullerton (R)	X		X	X			X
North/Clybourn				X			
Clark/Division	X			X			X
Chicago/State	X				X	X	X
Grand/State	X					X	
State Subway							
Washington	X		X			X	
Monroe	X				X	X	
Jackson	X		X		X	X	
South Side							
Roosevelt						X	
Tech-35	X				X		
51							X
Jackson Park							
Jackson Park	X	X		X			
Englewood							
Harvard							X
Ashland	X	X		X			

The addition of elevators to rapid transit stations will increase the annual operating costs of the CTA. Added operating costs will result from the need to inspect and maintain the elevators. Actual operating experience at New York City Transit Authority shows that each elevator costs an average of $20,000 a year to operate, inspect, and maintain.

The 321(a) Rail Retrofit Evaluation report states that 117 elevators would be necessary to make 71 key stations accessible. One existing elevator in a non-key station brings the total number of elevators to 118.

The following details estimated elevator operating costs by route for full compliance with the 504 regulations.

Route	Number of Elevators	Annual Operating Cost
North-South	29	$ 580,000
West-Northwest	29	580,000
West-South	13	260,000
Ravenswood	5	100,000
Loop	36	720,000
Evanston	6	120,000
Skokie Swift	0	-
TOTAL	118*	$2,360,000

*Actual number of elevators may vary, based on final design

DESCRIPTION AND STATUS OF PRESENT STATIONS

The Chicago Transit Authority operates 140 stations on its Rapid Transit System. These stations are located on a variety of structural systems which include elevated structures, subways and stations at grade. The age of the stations ranges from 1892 to those recently completed as part of our Capital Improvement Program. The O'Hare Extension now under construction will add four additional stations. A complete station inventory is attached.

Under our present Modernization Program, the CTA has completed or will soon complete eleven stations, nine of which will be fully accessible for the handicapped and are as follows:

Desplaines/Congress
Cicero/Douglas
79th/Dan Ryan
Kimball/Ravenswood
Western/Ravenswood
Loyola/North-South
Granville/North-South
Polk/West-Northwest
Jackson/North-South (Incl. Jackson WNW)
47th/North-South
Pulaski/West-Northwest-Douglas

STATION MODERNIZATION PLAN

A phased twelve-year Modernization Program based on a comprehensive examination of facilities and traffic has been developed. The total estimated budget for the twelve-year program is $87,500,000, not including estimated cost for Clark/Lake. Factors considered for the selection of the stations also included accessibility needs for the handicapped, intermodal transfer and geographic distribution. For the purposes of estimating, the budget indicated herein has been extracted, where possible, from the UMTA sponsored 321 Study and is based on 1979 dollars. It is presumed that these estimates are adequate to implement this program.

Phase I will include 12 stations and will be completed within five years of the inception of this program with an estimated budget of $29,700,000, not including estimated cost for Clark/Lake. This includes a proposed new station at 63rd and Calumet to replace other facilities on the Jackson Park Branch. See attached Exhibits "A" & "B" for schedule, selection factors and estimated cost.

63rd/Calumet (NS)
Linden (Evanston)
Lake Transfer (WNW)
Jackson (WNW)
Wilson (NS)
U. of I./Halsted (WNW)
Logan Square (WNW)
63rd/Ashland (NS)
35th/Tech (NS)
Austin (WS)
95th (NS)
Clark/Lake (WS)-(To be built in conjunction with State of Illinois Building.)

Phase II will include 14 additional stations and will be completed within 12 years of the inception of this program with an estimated budget of $60,700,000.

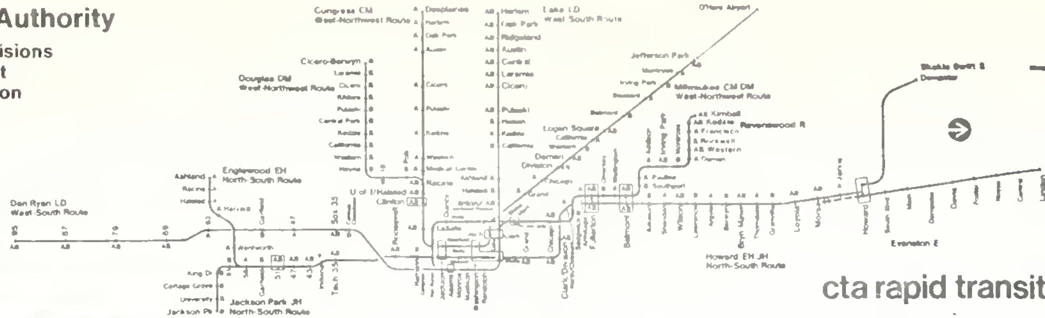
Howard (NS)	Jefferson Park (WNW)
Belmont (NS)	Damen (WNW) Milwaukee
Fullerton (NS)	Washington (WNW)
Washington (NS)	Harlem (WS)
51 (NS)	Francisco (Rav.)
55 (NS)	Main (Evanston)
California (WNW) Milwaukee	Dempster (Swift)

Other Improvements

During this twelve-year Station Modernization Program, numerous other improvements will be required to maintain passenger convenience, comfort and safety. These will include structural, platform and canopy repairs, escalator and elevator modernization, shelters and passenger heating, graphics and fare collection equipment, agent booths, lighting, communications and other improvements. These will be developed separately. Where possible, accessibility of stairways, ramps or fare controls will be included.

Chicago Transit Authority

General Operations Divisions
Engineering Department
Plant Engineering Section



Rail system — Station inventory

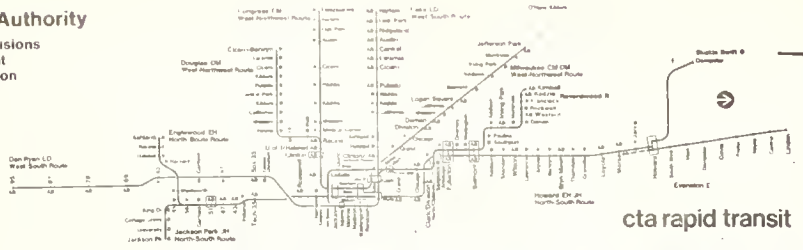
OP-y79147

May 15, 1979

ROUTE	STATION	BRANCH	LINES SERVED	STOP	ENTERING PASSENGERS NOV '78 (WEEKDAY)	RANK BY TRAFFIC	PLATFORM WIDTH (FT) MIN MAX	LENGTH OF PLATFORM (FT)	No ENTRIES	No BOOTHS	ESCALATOR	RAMP	STAIRS	DATE BUILT	LATEST IMPROV DATE
NORTH – SOUTH	HOWARD	N SIDE	S,EH,JH,L	ALL	9900	18	16	485	1	2	1		3	1920	1961
	JARVIS	N SIDE	EH	A	1400	106	12	422	1	1			3	1920	
	MORSE	N SIDE	EH JH	AB	5850	20	14	422	2	2			4	1920	
	LOYOLA	N SIDE	EH JH	AB	6300	24	12	430	2	2			4	1920	1980
	GRANVILLE	N SIDE	JH	B	2800	64	12	430	1	1			3	1920	1979
	THORNDALE	N. SIDE	EH	A	2550	72	12	424	1	1			3	1920	
	BRYN MAWR	N SIDE	EH JH	AB	5800	28	12	425	1	1	1		2	1920	1974
	BERWYN	N SIDE	JH	B	2300	81	12	424	1	1			3	1920	
	ARGYLE	N SIDE	EH	A	2100	88	12	424	1	1			2	1920	
	LAWRENCE	N SIDE	JH	B	2450	78	12	424	1	1			2	1920	
	WILSON	N SIDE	EH JH	AB	5500	28	7/18	424	2	2			3	1900	1977
	SHERIDAN	N SIDE	EH	A	2900	61	4/12	409	1	1			4	1900	
	ADDISON	N SIDE	JH	B	2850	63	7/10	403	1	2			6	1900	
	BELMONT	N SIDE	R EH JH	ALL	5800	27	5/15	426	1	2			4	1900	
	FULLERTON	N SIDE	R EH JH	ALL	7400	22	3/13	421	1	2			8	1900	
	NORTH / CLYBOURN	N SIDE	EH	A	1700	98	12	509	1	1	2		4	1943	
	CLARK / DIVISION	N SIDE	EH JH	AB	4950	31	19	488	1	2	1		5	1943	
	CHICAGO / STATE	N SIDE	EH JH	AB	11900	8	12	499	1	1	2		6	1943	
	GRAND / STATE	N SIDE	EH JH	AB	6150	26	12	493	1	1	2		6	1943	
	WASHINGTON	ST SUB	EH JH	AB	23600	2	22	500	3	5	5		17	1943	1980
	MONROE	ST. SUB	EH JH	AB	10500	12	22	500	2	4	4		12	1943	1980
	JACKSON	ST SUB	EH JH	AB	13000	6	22	500	3	5	5		17	1943	1980
	HARRISON	S SIDE	JH	B	2150	84	22	560	1	1	1		3	1943	
	ROOSEVELT	S SIDE	EH JH	AB	3950	40	22	497	1	1			3	1943	
	TECH / 35	S SIDE	EH JH	AB	4850	32	15	424	2	2	1		3	1892	1965
	INDIANA	S SIDE	EH	A	1050	122	8/22	402	1	2			6	1892	1977
	43	S SIDE	EH JH	AB	2900	62	5/8	405	1	1			4	1892	1976
	47	S SIDE	EH JH	AB	3950	41	5/8	403	1	1			4	1892	
	51	S SIDE	EH JH	AB	3300	54	5/8	399	1	1			4	1892	
	GARFIELD	S SIDE	JH	B	1950	90	5/8	400	1	1			2	1892	
	58	S SIDE	EH	A	1100	120	12/15	401	1	1			2	1892	
	61	JACK PK	JH	B	1600	100	5/8	400	1	1			2	1893	
	KING DRIVE	JACK PK	JH	B	2000	88	5/14	401	1	1			4	1893	
	COTTAGE GROVE	JACK PK	JH	B	2900	60	5/9	398	1	1			4	1893	
	UNIVERSITY	JACK PK	JH	B	1300	116	9/15	402	1	1			4	1893	
	JACKSON PARK	JACK PK	JH	B	4800	33	14	482	1	1			6	1893	
	WENTWORTH	ENGLWD	EH	A	800	135	4/10	389	1				4	1905	
	HARVARD	ENGLWD	EH	A	900	127	4/9	401	1				6	1905	
	HALSTED	ENGLWD	EH	A	2750	66	6/10	398	1	1			5	1906	
	RACINE	ENGLWD	EH	A	1700	97	4/10	399	1	1			4	1907	
	ASHLAND	ENGLWD	EH	A	6500	23	22	519	1	3	2		4	1969	
WEST – NORTH	O'HARE TERMINAL	MILW	PROPOSED												
	ROSEMONT	MILW	PROPOSED												
	CUMBERLAND	MILW	PROPOSED												
	HARLEM	MILW	PROPOSED												
	JEFFERSON PARK	MILW	CM DM	AB	15850	3	25	439	1	2	2		2	1970	
	MONTROSE	MILW	CM	A	2200	82	11/19	424	2	1			2	1970	
	IRVING PK / PULASKI	MILW	DM	B	4350	37	12	528	2	2	2		4	1970	
	ADDISON	MILW	CM	A	3550	51	12	506	1	1	1		1	1970	
	BELMONT / KIMBALL	MILW	DM	B	4500	39	9/18	606	1	1	2		2	1970	
	LOGAN SQ / SPAULDING	MILW	CM DM	AB	7600	21	18	057	2	2	5		4	1970	
	CALIFORNIA	MILW	CM	A	1950	89	5/12	314	1	1			4	1895	
	WESTERN	MILW	DM	B	2200	83	5/12	429	1	1			4	1895	
	DAMEN	MILW	CM DM	AB	3100	56	5/12	326		1			5	1895	
	DIVISION / ASHLAND	MILW	CM DM	AB	4750	34	19	493	1	1			5	951	
	CHICAGO	MILW	CM	A	800	93	19	499	1	1	1		4	95	
	GRAND	MILW	CM	B	1300	114	9	500	1	1	1		6	951	
	LAKE TRANSFER	DEAR'N	CM DM	AB	10550	10	23	638	2	2	2		8	1951	
	WASHINGTON	DEAR'N	CM DM	AB	15500	4	23	500	2	4	2		6	1951	
	MONROE	DEAR'N	CM DM	AB	10100	13	23	500	2	4	2		6	951	
	JACKSON	DEAR'N	CM DM	AB	10500	11	23	500	2	4	2		6	951	
	LA SALLE / CONGRESS	DEAR'N	CM DM	AB	2450	74	23	636	1	1	2		4	1951	
	CLINTON	CONG	CM DM	AB	3600	50	20	500	1	1	2		3	958	
	U/I HALSTED	CONG	CM DM	AB	8 50	18	15	600	3	3	1	2	2	958	965
	RACINE	CONG	CM DM	AB	2450	78	15	600	2	2		2		958	
	MEDICAL CENTER / OGDEN	CONG	CM	A	3150	86	15	600		1		2	1	958	
	WESTERN	CONG	CM	A	950	128	5	600				1		958	
	KEDZIE	CONG	CM	A	2350	78	12	600	2	2		2		958	
	PULASKI	CONG	CM	A	1450	106	12	800	1	1		2		1958	
	CICERO	CONG	CM	A	1600	98									

Chicago Transit Authority
General Operations Division
Engineering Department
Plant Engineering Section

Rail system | OP-y79147
Station inventory | May 15, 1979

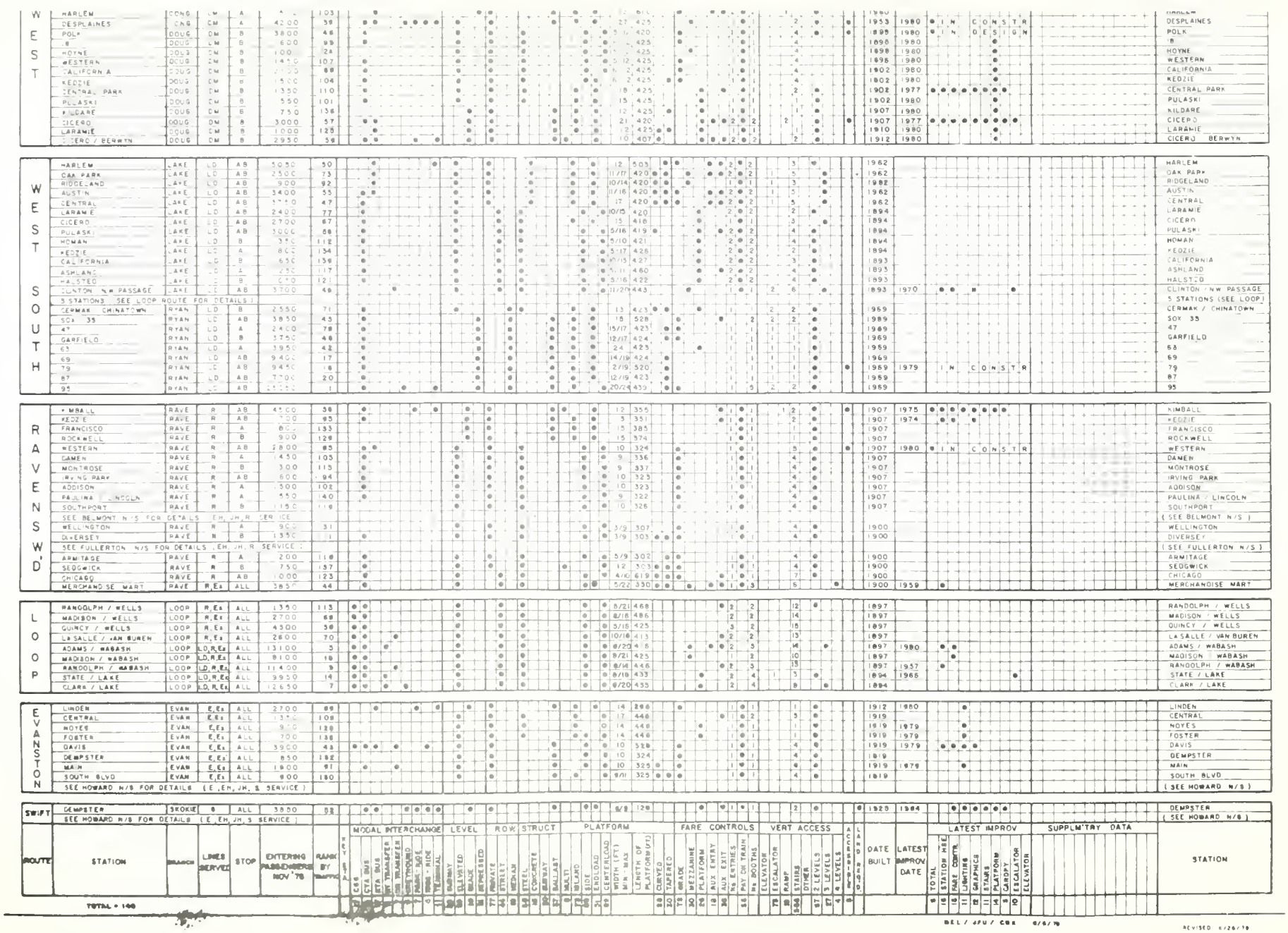


cta rapid transit

ROUTE	STATION	BRANCH	LINES SERVED	STOP	ENTERING PASSENGERS NOV '78 (WEEKDAY)	RANK BY TRAFFIC	MODAL INTERCHANGE	LEVEL	ROW	STRUCT	PLATFORM	FARE CONTROLS	VERT ACCESS	DOOR DIST.	DATE BUILT	LATEST IMPROV DATE	LATEST IMPROV	SUPPLMTRY DATA	STATION
NORTH – SOUTH	HOWARD	N SIDE	SEH,JH,E	ALL	9900	19									1920	1981			HOWARD
	JARVIS	N SIDE	EH	A	7400	108									1920				JARVIS
	MORSE	N SIDE	EH,JH	AB	5850	28									1920				MORSE
	LOYOLA	N SIDE	EH,JH	AB	6300	24									1920	1980	IN CONSTR		LOYOLA
	GRANVILLE	N SIDE	JH	B	2800	64									1920	1979	IN CONSTR		GRANVILLE
	THORNDALE	N SIDE	EH	A	2550	72									1920				THORNDALE
	BRYN MAWR	N SIDE	EH,JH	AB	5800	26									1920	1974			BRYN MAWR
	BERWYN	N SIDE	JH	B	2300	61									1920				BERWYN
	ARGYLE	N SIDE	EH	A	2100	66									1920				ARG LE
	LAWRENCE	N SIDE	JH	B	2450	78									1920				LAW RENCE
	WILSON	N SIDE	EH,JH	AB	5500	29									1900	1977			WIL SON
	SHERIDAN	N SIDE	EH	A	2900	61									1900				SHER DAN
	ADDISON	N SIDE	JH	B	2850	63									1900				ADDISON
	BELMONT	N SIDE	EH,JH	ALL	5870	27									1900				BEL MONT
	FULLERTON	N SIDE	EH,JH	ALL	7400	22									1900				FUL LERTON
	NORTH / CLYBOURN	N SIDE	EH	A	1700	98									1943				NOR TH / CLYBOURN
	CLARK / DIVISION	N SIDE	EH,JH	AB	4950	51									1943				CLAR K DIVISION
	CHICAGO / STATE	N SIDE	EH,JH	AB	11900	8									1943				CHIC GO / STATE
	GRAND / STATE	N SIDE	EH,JH	AB	6150	28									1943				GRAN D STATE
	WASHINGTON	ST SUB	EH,JH	AB	23400	2									1943	1980			WAS HINGTON
	MONROE	ST SUB	EH,JH	AB	10500	12									1943	1980			MONROE
	JACKSON	ST SUB	EH,JH	AB	13000	6									1943	1980			JACKSON
	HARRISON	S SIDE	JH	B	2150	84									1943				HARRISON
	ROOSEVELT	S SIDE	EH,JH	AB	3950	40									1943				ROOSEVELT
	TECH / 35	S SIDE	EH,JH	AB	9850	32									1892	1965			TECH / 35
	INDIANA	S SIDE	EH	A	1050	122									1892	1977			INDIANA
	43	S SIDE	EH,JH	AB	1300	62									1892	1976			43
	47	S SIDE	EH,JH	AB	3950	41									1892				47
	51	S SIDE	EH,JH	AB	3300	54									1892				51
	GARFIELD	S SIDE	JH	B	950	90									1892				GARFIELD
	58	S SIDE	EH	A	1100	120									1892				58
	61	JACK PK	JH	B	1600	100									1893				61
	KING DRIVE	JACK PK	JH	B	2000	88									1893				KING DRIVE
	COTTAGE GROVE	JACK PK	JH	B	2900	60									1893				COTTAGE GROVE
	UNIVERSITY	JACK PK	JH	B	1300	116									1893				UNIVERSITY
	JACKSON PARK	JACK PK	JH	B	4800	33									1893				JACKSON PARK
	WENTWORTH	ENGLWD	EH	A	800	135									1905				WENTWORTH
	HARVARD	ENGLWD	EH	A	900	121									1905				HARVARD
	HALSTED	ENGLWD	EH	A	2750	66									1905				HALSTED
	RACINE	ENGLWD	EH	A	1700	97									1907				RACINE
	ASHLAND	ENGLWD	EH	A	6500	23									1968				ASHLAND
WEST – NORTHWEST	O'HARE TERMINAL	MILW	PROPOSED																O'HARE TERMINAL
	ROSEMONT	MILW	PROPOSED																ROSEMONT
	CUMBERLAND	MILW	PROPOSED																CUMBERLAND
	HARLEM	MILW	PROPOSED																HARLEM
	JEFFERSON PARK	MILW	CM,DM	AB	1595 0	3									1970				JEFFERSON PARK
	MONTROSE	MILW	CM	A	2200	82									1970				MONTROSE
	IRVING PK / PULASKI	MILW	DM	B	4350	37									1970				IRVING PARK / PULASKI
	ADDISON	MILW	CM	A	3550	51									1970				ADDISON
	BELMONT / KIMBALL	MILW	DM	B	4500	35									1970				BELMONT / KIMBALL
	LOGAN SQ / SPAULDING	MILW	CM,DM	AB	7600	21									1970				LOGAN SQ / SPAULDING
	CALIFORNIA	MILW	CM	A	1950	89									1895				CALIFORNIA
	WESTERN	MILW	DM	B	2200	83									1895				WESTERN
	DAMEN	MILW	CM,DM	AB	3100	56									1898				DAMEN
	DIVISION / ASHLAND	MILW	CM,DM	AB	4750	34									1951				DIVISION / ASHLAND
	CHICAGO	MILW	CM	A	1800	93									1951				CHICAGO
	GRAND	MILW	DM	B	1370	114									1951				GRAND
	LAKE TRANSFER	DEARN	CM,DM	AB	10550	10									1951				LAKE TRANSFER
	WASHINGTON	DEARN	CM,DM	AB	15500	4									1951				WASHINGTON
	MONROE	DEARN	CM,DM	AB	10100	15									1951				MONROE
	JACKSON	DEARN	CM,DU	AB	10500	11									1951				JACKSON
	LASALLE / CONGRESS	DEARN	CM,DU	AB	2450	79									1951				LA SALLE / CONGRESS
	CLINTON	CONG	CM,DM	AB	3600	50									1958				CLINTON
	U/I - HALSTED	CONG	CM,DM	AB	8150	18									1958	1965			U/I HALSTED
	RACINE	CONG	CM,DM	AB	2450	78									1958				RACINE
	MEDICAL CENTER / OGDEN	CONG	CM	A	3150	58									1958				MEDICAL CENTER / OGDEN
	WESTERN	CONG	CM	A	950	128									1958				WESTERN
	KEDZIE	CONG	CM	A	2350	78									1958				KEDZIE
	PULASKI	CONG	CM	A	1450	106									1958				PULASKI
	CICERO	CONG	CM	A	1600	98									1958				CICERO
	AUSTIN	CONG	CM	A	2300	60									1962				AUSTIN
	OAK PARK	CONG	CM	A	2050	87									1901				OAK PARK
	HARLEM	CONG	CM	A	1500	105									1980				HARLEM
	DES PLAINES	CONG	CM	A	4200	39									1903	1980	IN CONSTR		DESPLAINES
	POLK	DOUG	DM	B	3800	48									1895	1980	IN DESIGN		POLK
	18	DOUG	DM	B	1600	99									1898	1960			18
	HOYNE	DOUG	DM	B	1000	124									1898	1980			HOYNE
	WESTERN	DOUG	DM	B	1450	107									1958	1980			WESTERN
	CALIFORNIA	DOUG	DM	B	2100	96									1902	1980			CALIFORNIA
	KEDZIE	DOUG	DM	B	1500	104									1902	1980			KEDZIE
	CENTRAL PARK	DOUG	DM	B	1350	110									1902	1977			CENTRAL PARK
	PULASKI	DOUG	DM	B	1550	101									1908	1960			PULASKI
	KILDARE	DOUG	DM	B	750	139									1907	1960			KILDARE
	CICERO	DOUG	DM	B	3000	57									1907	1977			CICERO
	LARAMIE	DOUG	DM	B	1000	126									1910	1960			LARAMIE
	CICERO / BERWYN	DOUG	DM	B	2950	59									1912	1980			CICERO / BERWYN
WEST SOUTH	HARLEM	LAKE	LO	AB	5050	30									1962				HARLEM
	OAK PARK	LAKE	LO	AB	2500	73									1962				OAK PARK
	RIDGELAND	LAKE	LO	AB	1900	92									1962				RIDGELAND
	AUSTIN	LAKE	LO	AB	3400	53									1962				AUSTIN
	CENTRAL	LAKE	LO	AB	3750	47									1962				CENTRAL
	LARAMIE	LAKE	LO	AB	2400	77									1894				LARAMIE
	CICERO	LAKE	LO	AB	2700	67									1894				CICERO
	PULASKI	LAKE	LO	AB	3000	88									1894				PULASKI
	HOMAN	LAKE	LO	B	1350	118									1894				HOMAN
	KEDZIE	LAKE	LO	A	800	134									1894				KEDZIE
	CALIFORNIA	LAKE	LO	B	650	139									1893				CALIFORNIA
	ASHLAND	LAKE	LO	A	1250	117									1893				ASHLAND
	HALSTED	LAKE	LO	B	1050	121									1893				HALSTED
	CLINTON / NW PASSAGE	LAKE	LO	AB	3700	48									1893	1970			CLINTON / NW PASSAGE
	5 STATIONS (SEE LOOP ROUTE FOR DETAILS)																		5 STATIONS (SEE LOOP)
	CERMAK / CHINATOWN	RYAN	LO	B	2550	71									1989				CERMAK / CHINATOWN
	SOX - 35	RYAN	LO	AB	3850	45									1969				SOX - 35
	47	RYAN	LO	A	2400	78									1969				47
	GARFIELD	RYAN	LO	B	3700	49									1969				GARFIELD
	63	RYAN	LO	A	3950	42									1969				63
	69	RYAN	LO	AB	9400	7									1969				69
	79	RYAN	LO	AB	9450	10									1969	1979	IN CONSTR		79
	87	RYAN	LO	AB	7700	20									1969				87
	95	RYAN	LO	AB	25050	1									1988				95
RAVENSWD'	KIMBALL	RAVE	R	AB	4500	38									1907	1975			KIMBALL
	KEDZIE	RAVE	R	A	1700	88									1907	1974			KEDZIE
	FRANCISCO	RAVE	R	A	600	133									1907				FRANCISCO
	ROCKWELL	RAVE	R	B	900	128									1907				ROCKWELL
	WESTERN	RAVE	R	AB	2800	65									1907	1980	IN CONSTR		WESTERN
	DAMEN	RAVE	R	A	1450	103									1907				DAMEN
	MONTROSE	RAVE	R	B	1300	118									1907				MONTROSE
	IRVING PARK	RAVE	R	AB	1800	94									1907				IRVING PARK
	ADDISON	RAVE	R	A	1500	102									1907				ADDISON
	PAULINA / LINCOLN	NAVE	R	A	550	140									1907				PAULINA / LINCOLN
	SOUTHPORT	RAVE	R	B	1150	119									1907				SOUTHPORT
	SEE BELMONT N/S FOR DETAILS (EH,JH,R SERVICE)																		(SEE BELMONT N/S)
	WELLINGTON	RAVE	R	A	900	131									1900				WELLINGTON
	DIVERSEY	RAVE	R	B	1350	111									1900				DIVERSEY
	SEE FULLERTON N/S FOR DETAILS (EH,JH,R SERVICE)																		(SEE FULLERTON N/S)
	ARMITAGE	RAVE	R	A	1200	110									1900				ARMITAGE
	SEDGWICK	RAVE	R	B	750	137									1900				SEDGWICK
	CHICAGO	RAVE	R	AB	1000	123									1900				CHICAGO
	MERCHANDISE MART	RAVE	R,E+	ALL	3850	64									1900	1959			MERCHANDISE MART
LOOP	RANDOLPH / WELLS	LOOP	R,E+	ALL	1350	113									1897				RANDOLPH / WELLS
	MADISON / WELLS	LOOP	R,E+	ALL	2700	69									1897				MADISON / WELLS
	QUINCY / WELLS	LOOP	R,E+	ALL	4300	36									1897				QUINCY / WELLS
	LASALLE / VAN BUREN	LOOP	R,E+	ALL	2600	70									1897				LA SALLE / VAN BUREN
	ADAMS / WABASH	LOOP	LO,RE+	ALL	13100	3									1897	1980			ADAMS / WABASH
	MADISON / WABASH	LOOP	LO,RE+	ALL	6100	19									1897				MADISON / WABASH
	RANDOLPH / WABASH	LOOP	LO,RE+	ALL	11400	9									1897	1957			RANDOLPH / WABASH
	STATE / LAKE	LOOP	LO,RE+	ALL	9950	14									1894	1968			STATE / LAKE
	CLARK / LAKE	LOOP	LO,RE+	ALL	12650	7									1894				CLARK / LAKE
EVANSTON	LINDEN	EVAN	E,E+	ALL	2700	68									1912	1960			LINDEN
	CENTRAL	EVAN	E,E+	ALL	1350	109									1919				CENTRAL
	NOYES	EVAN	E,E+	ALL	900	138									1919	1979			NOYES
	FOSTER	EVAN	E,E+	ALL	700	136									1919	1979			FOSTER
	DAVIS	EVAN	E,E+	ALL	3900	45									1919	1979			DAVIS
	DEMPSTER	EVAN	E,E+	ALL	850	106									1919				DEMPSTER
	MAIN	EVAN	E,E+	ALL	1600	81									1919	1979			MAIN
	SOUTH BLVD	EVAN	E,E+	ALL	900	130									1918				SOUTH BLVD
	SEE HOWARD N/S FOR DETAILS (E,EH,JH,R SERVICE)																		(SEE HOWARD N/S)
SWIFT	DEMPSTER	SKOKIE	S	ALL	3880	88									1925	1964			DEMPSTER
	SEE HOWARD N/S FOR DETAILS (E,EH,JH,R SERVICE)																		(SEE HOWARD N/S)

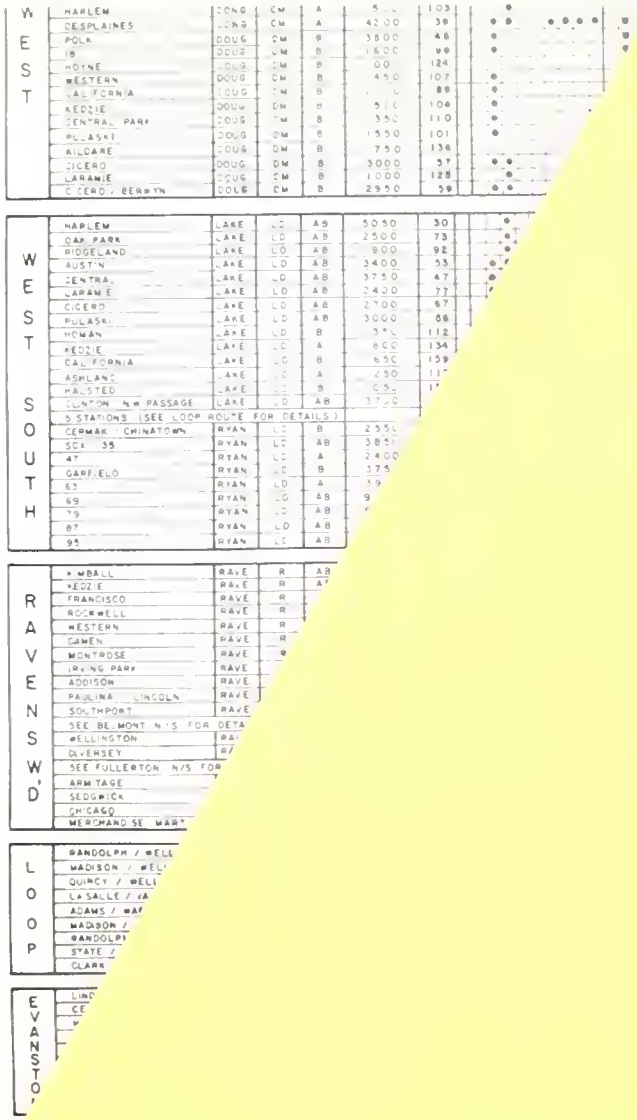
ROUTE	STATION	BRANCH	LINES SERVED	STOP	ENTERING PASSENGERS NOV '78	RANK BY TRAFFIC	MODAL INTERCHANGE	LEVEL	ROW	STRUCT	PLATFORM	FARE CONTROLS	VERT ACCESS	DOOR DIST.	DATE BUILT	LATEST IMPROV DATE	LATEST IMPROV	SUPPLMTRY DATA	STATION

TOTAL = 140


WEST
HARLEM CONG CM A 103 1953 1980 IN CONSTR
DESPLAINES CAG CM A 4200 38 1953 1980 IN CONSTR
POLK DOUG CM B 3800 46 1898 1980 IN DESIGN
18 DOUG CM B 600 99 1898 1980
HOYNE DOUG CM B 100 124 1898 1980
WESTERN DOUG CM B 1450 107 1895 1980
CALIFORNIA DOUG CM B 2000 88 1902 1980
KEDZIE DOUG CM B 1500 104 1902 1980
CENTRAL PARK DOUG CM B 1350 110 1902 1977
PULASKI DOUG CM B 550 101 1902 1980
KILDARE DOUG CM B 750 136 1907 1980
CICERO DOUG CM B 3000 57 1907 1977
LARAMIE DOUG CM B 1000 125 1910 1980
CICERO / BERWYN DOUG CM B 2950 58 1912 1980
SOUTH
HARLEM LAKE LO AB 5050 50 1962
OAK PARK LAKE LO AB 2500 73 1962
RIDGELAND LAKE LO AB 900 92 1982
AUSTIN LAKE LO AB 3400 55 1962
CENTRAL LAKE LO AB 5740 47 1962
LARAMIE LAKE LO AB 2400 77 1894
CICERO LAKE LO AB 2700 67 1894
PULASKI LAKE LO AB 3000 68 1894
HOMAN LAKE LO B 350 112 1894
KEDZIE LAKE LO A 800 134 1894
CALIFORNIA LAKE LO B 650 138 1893
ASHLAND LAKE LO A 250 117 1893
HALSTED LAKE LO B 1050 121 1893
CLINTON - NW PASSAGE LAKE LO AB 3700 49 1893 1970
(5 STATIONS - SEE LOOP ROUTE FOR DETAILS)
CERMAK - CHINATOWN RYAN LO B 2550 71 1969
SOX - 35 RYAN LO AB 3850 43 1989
47 RYAN LO A 2400 78 1969
GARFIELD RYAN LO B 3750 46 1969
63 RYAN LO A 3950 42 1959
69 RYAN LO AB 9400 17 1969
79 RYAN LO AB 9450 16 1959 1979 IN CONSTR
87 RYAN LO AB 7700 20 1959
95 RYAN LO AB 25250 1 1959
RAVENSWD
KIMBALL RAVE R AB 4500 36 1907 1975
KEDZIE RAVE R AB 700 95 1907 1974
FRANCISCO RAVE R A 800 133 1907
ROCKWELL RAVE R B 900 129 1907
WESTERN RAVE R AB 2800 85 1907 1980 IN CONSTR
DAMEN RAVE R A 1450 105 1907
MONTROSE RAVE R B 300 115 1907
IRVING PARK RAVE R AB 600 94 1907
ADDISON RAVE R A 1300 102 1907
PAULINA - LINCOLN RAVE R A 950 140 1907
SOUTHPORT RAVE R B 1150 118 1907
(SEE BELMONT N/S FOR DETAILS - EM, JH, R SERVICE)
WELLINGTON RAVE R A 900 31 1900
DIVERSEY RAVE R B 1350 1 1900
(SEE FULLERTON N/S FOR DETAILS - EM, JH, R SERVICE)
ARMITAGE RAVE R A 200 110 1900
SEDGWICK RAVE R B 750 137 1900
CHICAGO RAVE R AB 1000 123 1900
MERCHANDISE MART RAVE R,Ea ALL 3850 44 1900 1959
LOOP
RANDOLPH / WELLS LOOP R,Ea ALL 1350 113 1897
MADISON / WELLS LOOP R,Ea ALL 2700 68 1897
QUINCY / WELLS LOOP R,Ea ALL 4300 36 1897
LaSALLE / VAN BUREN LOOP R,Ea ALL 2800 70 1897
ADAMS / WABASH LOOP LO,R,Ea ALL 13100 3 1897 1980
MADISON / WABASH LOOP LO,R,Ea ALL 8100 18 1897
RANDOLPH / WABASH LOOP LO,R,Ea ALL 11400 9 1897 1957
STATE / LAKE LOOP LO,R,Ea ALL 9950 14 1894 1965
CLARK / LAKE LOOP LO,R,Ea ALL 12650 7 1884
EVANSTON
LINDEN EVAN E,Ea ALL 2700 89 1912 1980
CENTRAL EVAN E,Ea ALL 1350 108 1919
NOYES EVAN E,Ea ALL 900 128 1919 1979
FOSTER EVAN E,Ea ALL 700 138 1919 1979
DAVIS EVAN E,Ea ALL 3900 43 1919 1979
DEMPSTER EVAN E,Ea ALL 850 132 1919
MAIN EVAN E,Ea ALL 1800 91 1919 1979
SOUTH BLVD EVAN E,Ea ALL 900 130 1919
SEE HOWARD N/S FOR DETAILS (E ,EM, JH, S SERVICE)
SWIFT
DEMPSTER SKOKIE S ALL 3800 88 1928 1984
SEE HOWARD N/S FOR DETAILS (E ,EM, JH, S SERVICE)
ROUTE
STATION
BRANCH
LINES SERVED
STOP
ENTERING PASSENGERS NOV '78
RANK BY TRAFFIC
MODAL INTERCHANGE
CTA BUS
CTA RAIL
PR TRANSFER
GR TRANSFER
CENTRAL PARK - RIDE
KEDZIE - RIDE
TERMINAL
LEVEL
RAPID TRANSIT
ELEVATED
GRADE
DEPRESSED
ROW STRUCT
PRIVATE
STREET
MEDIAN
STEEL
CONCRETE
EARTH
BALLAST
MULTI
ISLAND
SIDE
ENDLOAD
CENTERLOAD
PLATFORM
WIDTH (FT) MIN - MAX
LENGTH OF PLATFORM(FT)
CURVED
TAPERED
GRADE
FARE CONTROLS
MEZZANINE
PLATFORM
AUX ENTRY
AUX EXIT
No ENTRIES
PAY ON TRAIN
No BOOTHS
VERT ACCESS
ESCALATOR
RAMP
STAIRS
OTHER
2 LEVELS
3 LEVELS
4 LEVELS
ACCESSIBLE
DATE BUILT
LATEST IMPROV DATE
LATEST IMPROV
TOTAL
STATION MEZ
FARE CONTR
LIMITING
GRAPHICS
STAIRS
PLATFORM
CANOPY
ESCALATOR
ELEVATOR
SUPPLM'TARY DATA
STATION
TOTAL = 140
BEL / JFU / CBE 6/6/79
REVISED 8/26/79

articulated buses. These
ake Shore Drive corridors.
will be developed later in
y Committee.

d bids for the purchase of 20 small buses at
. In 1981, CTA plans to purchase 20 additional small
rease the per cost per bus. Full compliance with the
require replacement of these vehicles because one half of
be accessible in 1987.


WEST
HARLEM
DESPLAINES
POLK
18
HOYNE
WESTERN
CALIFORNIA
KEDZIE
CENTRAL PARK
PULASKI
KILDARE
CICERO
LARAMIE
CICERO / BERWYN
WEST SOUTH
HARLEM
OAK PARK
RIDGELAND
AUSTIN
CENTRAL
LARAMIE
CICERO
PULASKI
HOMAN
KEDZIE
CALIFORNIA
ASHLAND
HALSTED
CLINTON N/B PASSAGE
3 STATIONS (SEE LOOP ROUTE FOR DETAILS)
CERMAK / CHINATOWN
35
47
GARFIELD
63
69
79
87
95
RAVENSWOOD
RANDOLPH / WELL
MADISON / WEL
QUINCY / WELL
LASALLE / WA
ADAMS / WAB
MADISON /
RANDOLPH
STATE /
CLARK
EVANSTON

Introduction

Federal 504 regulations require that all new buses be lift-equipped, and that by July, 1989, at least one half of the vehicles used in rush hour service must be lift-equipped. The CTA has developed a Bus Replacement Program through the Year 2000. (See GOM 80-16 attached.) If sufficient funds are made available to fund this replacement program, CTA will fully comply with the 1989 deadline two years ahead of schedule, in 1987.

Capital Costs

It is estimated that the added capital cost per bus for a wheelchair lift is $17,100. The added annual capital cost required to meet the 504 bus requirements over the next 12 years is illustrated in the following table.

ADDED CAPITAL COSTS--LIFTS

Year	Buses to be Purchased	Added Capital Cost
1982	125	$ 2,137,500
1983	148	2,530,800
1984	148	2,530,800
1985	300	5,130,000
1986	300	5,130,000
1987	300	5,130,000
1988	300	5,130,000
1989	300	5,130,000
1990	125	2,137,500
1991	200	3,420,000
1992	125	2,137,500
1993	125	2,137,500
	TOTAL	$42,681,600

Assignment of Buses

The first order of buses to be purchased is for 125 articulated buses. These buses will be used in the Archer, Jeffery and North Lake Shore Drive corridors. The assignment of lift-equipped vehicles to routes will be developed later in consultation with CATS Mobility Limited Advisory Committee.

Small Buses

CTA has received and accepted bids for the purchase of 20 small buses at approximately $75,000 per unit. In 1981, CTA plans to purchase 20 additional small buses. Inflation will increase the per cost per bus. Full compliance with the 504 regulations will not require replacement of these vehicles because one half of the bus fleet will be accessible in 1987.

The addition of lifts on fixed-route buses will increase the average annual operating cost per bus. The added operating costs result primarily from the need to inspect and maintain the lifts. The state-of-the-art of lift technology has not produced a proven, easily maintained and reliable lift to date.

In 1977, the transit system in St. Louis became the first transit operation to purchase a sizeable number of lift-equipped buses for fixed-route service. In 1979, St. Louis estimated the added incremental operating cost per mile of lifts at 10 cents per mile.

The U.S. DOT estimates that operating costs per bus per year will increase by $800 due to the presence of lifts.[1] Inspecting and maintaining the lift equipment in San Diego was calculated to cost $3380 per bus per year.[2] If the added annual operating cost is $1000 to $3000 per bus, the total annual cost to CTA will be $2,455,000 to $7,635,000 when all fixed-route buses are accessible.

The following table shows the added incremental operating costs CTA will incur over the next 12 years due to the addition of lifts on fixed-route buses using cost per mile estimates of 10 cents, 1979 average mileage per bus, and CTA's Bus Replacement Plan. The use of the average 1979 mileage per bus somewhat understates the initial annual mileage and consequently the added operating costs in the early years of the program, because CTA operates newer buses more hours per day than older buses.

CTA expects that the new generation of lifts it will be purchasing will require less maintenance than those in St. Louis. However, increased labor rates and continued inflation make the St. Louis 1979 10-cent cost per mile estimate reasonable for use as a 1982 CTA estimate of the added cost per mile.

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[1] Environmental Impact Statement Draft, on Section 504 Regulations, U.S. DOT, June, 1980, p. A-1.

[2] Recent Experience with Accessible Bus Services, by Robert Casey, UMTA, August, 1979, p. 26.

LIFT-EQUIPPED BUSES
12-Year Incremental Operating Costs

Year	Lift-equipped Buses Purchased[1]	Annual Mileage Per Bus - 1979[2]	Cost Per Mile[3]	Added Cost Per Purchase	Total Annual Costs
1982	125	32,683	.10	$ 408,538	$ 408,538
1983	148	32,683	.10	483,708	892,248
1984	148	32,683	.10	483,708	1,375,954
1985	300	32,683	.10	980,490	2,356,444
1986	300	32,683	.10	980,490	3,336,934
1987	300	32,683	.10	980,490	4,317,424
1988	300	32,683	.10	980,490	5,297,914
1989	300	32,683	.10	980,490	6,278,404
1990	125	32,683	.10	408,538	6,686,942
1991	200	32,683	.10	653,660	7,340,602
1992	125	32,683	.10	408,538	7,749,140
1993	125	32,683	.10	408,538	8,157,678
				12 YEAR TOTAL	$54,198,222

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[1]Lift-equipped buses includes standard and articulated buses.

[2]2420 buses (including spares) traveled 79,093,619 miles in 1979.

[3]Cost per mile is from St. Louis experience (1977-present).

KH/JHR:ml
9/15/80

Bus Fleet Description and Make-up

At the present time, the Chicago Transit Authority operates a fleet of 2422 buses on 139 routes. The average age of the fleet is 7.7 years. The various series range in age between 1 and 18 years. Of these, 1900 (78.5%) are air-conditioned and 1890 (78.1%) were purchased since 1972 with UMTA assistance. These percentages, in terms of vehicle assignments, apply within 1-2% at each of the 10 bus garages as well.

The 1890 buses purchased since 1972 represent the "primary" fleet. These coaches are assigned to provide all midday, evening, and weekend service, plus as much of the rush hour service as possible. Older, non-airconditioned buses are used primarily in tripper (weekday rush period) service only. The most recent acquisitions involved the purchase of 20 high capacity articulated buses in 1979, and approval for 125 additional high capacity accessible buses in 1980.

Bus Replacement Parameters

One of the most important fleet replacement parameters is the policy regarding replacement age. This program is based on the current UMTA guidelines involving bus replacement, which in turn are based on a bus life of 12 years. At the same time we would like to point out that given the nature of the CTA operation and mileage accumulation, there is a lot to be said for vehicle retirement which is based on mileage rather than age.[1]

One of the goals of this replacement plan is to program bus purchases on a yearly basis, thereby avoiding the problems associated with large numbers of buses coming due for extensive maintenance work or replacement at the same time. Unduly large orders of new buses tend to tax the capacity of the maintenance facilities and staff several years later. The proposed bus replacement program attempts to retire buses according to the UMTA guidelines for a 12 year life, with new buses ordered annually at a near constant rate. This provides for a more efficient maintenance program.

The second most important fleet replacement parameter is that of fleet size. For the purposes of this projection, the presently authorized fleet of 2480 buses is assumed.[2] It should be pointed out, however, that the precarious energy situation raises the possibility of dramatic increases in ridership in the years to come, which would require corresponding increases in the fleet size.

The fleet composition is expected to change in the years ahead with the continued acquisition of articulated buses. An analysis of CTA bus routes and

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[1] This is the subject of a presently funded technical study which is testing this hypothesis. Preliminary results indicate that given CTA mileage accumulation, the optimal life may be somewhat less than 12 years.

[2] To accommodate ridership increases, present plans call for an increase in the fleet size to 2480 upon the delivery of the 125 articulated buses presently on order.

schedules performed by the Operations Planning department determined that the CTA could effectively utilize as many as 1350 articulated buses at the present time.[3] This is due to the extremely heavy nature of many CTA routes. It is anticipated that articulated buses could initially be substituted for standard 40-foot buses on these routes on a 4 for 5 basis, offering a significant operational cost savings throughout the lives of the vehicles. This plan provides for an increase in fleet capacity (in terms of number of seats) due to the 28% greater seating capacity of the articulated bus. However, the actual number of buses in the fleet will decrease as more articulated buses are purchased.

The new Kedzie and Stony Island garages will be designed to facilitate the maintenance and storage of the articulated buses. Modifications will also be required at other locations to efficiently maintain a large complement of articulated buses.

Concerning new 40-foot coaches, the CTA Engineering department recommends that we delay purchase of 40-foot coaches until 1985 to allow further testing and product improvement and perhaps a new standard bus.

After 1985, it is recommended that both articulated and 40-footers be purchased. If standard 40-foot buses are replaced by Advanced Design Buses (ADB's), the the number of 40-footers purchased must be increased to compensate for the lower passenger carrying capacity of the ADB (50 seats vs. 44-46 seats).

The bus replacement program effectively begins in 1983 with the delivery of 148 articulated buses. The first purchase of new 40-foot buses occurs in 1985 with the delivery of 200 units.

Purchases are accelerated in the first years of the program in order to replace the many buses in the fleet which are over 12 years old as soon as possible. After these buses are replaced, the annual purchases are slowly changed into a regular program which would maintain a near constant average fleet age, thereby avoiding the purchase of extremely large numbers of vehicles in any one year and the resulting maintenance problems.

The fleet capacity in terms of number and seats increases by 7.2%, while fleet size in terms of number of buses decreases by 5.9%. These figures are based on the presently authorized projected fleet size of 2480 buses and fleet capacity of 126,030 seats.

The purchase of additional small buses for special handicapped service is not included in this plan. Twenty were purchased in 1980, and an additional 20 are planned for 1981.

JGG/TEG:ml

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[3]"Effectively utilized" is defined as being scheduled on routes where operational economies can be realized without unduly widening headways or where overloading can be reduced without adding vehicles.

Bus system	GOM 80-16
Bus replacement program	9-15-80

	Present buses																		
Year Received	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
1980	70		86	205		146	26			524	495	50	600		200		(20)			
1981	70		86	205		146	26			524	495	50	600		200		(20)			
1982	3		86	205		146	26			524	495	50	600		200		(20)			(12
1983				109		146	26			524	495	50	600		200		(20)			(12
1984						70	26			524	495	50	600		200		(20)			(12
1985										295	495	50	600		200		(20)			(12
1986											465	50	600		200		(20)			(12
1987											140	50	600		200		(20)			(12
1988													465		200		(20)			(12
1989													140		200		(20)			(12
1990															184		(20)			(12
1991																	(4)			(12
1992																				(12
1993																				(12
1994																				
1995																				
1996																				
1997																				
1998																				
1999																				
2000																				

Note: The numbers in parenthesis indicate Articulated Buses.

Bus Subcommittee
JGG/TEG 9/15/80

Present buses

Year Received	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
1980	70		86	205		146	26			524	495	50	600		200		(20)	
1981	70		86	205		146	26			524	495	50	600		200		(20)	
1982	3		86	205		146	26			524	495	50	600		200		(20)	
1983				109		146	26			524	495	50	600		200		(20)	
1984						70	26			524	495	50	600		200		(20)	
1985										295	495	50	600		200		(20)	
1986											465	50	600		200		(20)	
1987											140	50	600		200		(20)	
1988													465		200		(20)	
1989													140		200		(20)	
1990															184		(20)	
1991																	(4)	
1992																		
1993																		
1994																		
1995																		
1996																		
1997																		
1998																		
1999																		
2000																		

Planned new buses

Year Received	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Fleet size	Fleet capacity (No. of seats)
1980																					2,422	121,380
1981																					2,422	121,380
1982		(125)																			2,480	126,030
1983		(125)	(148)																		2,443	126,252
1984		(125)	(148)	(148)																	2,406	126,474
1985		(125)	(148)	(148)	(100) 200																2,381	126,624
1986		(125)	(148)	(148)	(100) 200	(100) 200															2,356	126,774
1987		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200														2,331	126,924
1988		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200													2,306	127,074
1989		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200												2,281	127,224
1990		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)											2,250	127,424
1991		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200										2,250	127,424
1992		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)									2,371	135,424
1993		(125)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)								2,496	143,424
1994			(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)							2,496	143,424
1995				(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)						2,473	141,952
1996					(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)					2,450	140,480
1997						(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145				2,420	139,330
1998							(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145	(125) 145			2,390	138,180
1999								(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145	(125) 145	(125) 145		2,360	137,030
2000									(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145	(125) 145	(125) 145	(125) 145	2,330	135,880

Note: The numbers in parenthesis indicate Articulated Buses.

Bus Subcommittee
JGG/TEG 9/15/80

Planned new buses →																			Fleet size	Fleet capacity (No.of seats)
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000		
																			2,422	121,380
																			2,422	121,380
)																			2,480	126,030
)	(148)																		2,443	126,252
)	(148)	(148)																	2,405	126,474
5)	(148)	(148)	(100) 200																2,381	126,624
5)	(148)	(148)	(100) 200	(100) 200															2,356	126,774
5)	(148)	(148)	(100) 200	(100) 200	(100) 200														2,331	126,924
5)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200													2,306	127,074
5)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200												2,281	127,224
5)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)											2,250	127,424
5)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200										2,250	127,424
5)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)									2,371	135,424
5)	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)								2,496	143,424
	(148)	(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)							2,496	143,424
		(148)	(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)						2,473	141,952
			(100) 200	(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)					2,450	140,480
				(100) 200	(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145				2,420	139,330
					(100) 200	(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145	(125) 145			2,390	138,180
						(100) 200	(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145	(125) 145	(125) 145		2,360	137,030
							(100) 200	(125)	200	(125)	(125)	(125)	(125)	(125)	(125) 145	(125) 145	(125) 145	(125) 145	2,330	135,880

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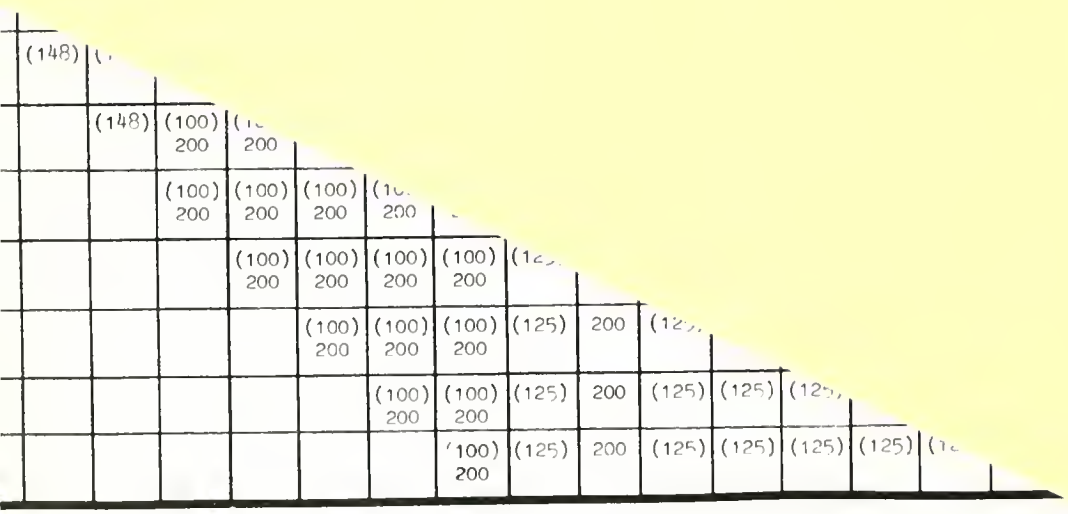

	(148)	[illegible]												
		(148)	(100) 200	[illegible] 200										
			(100) 200	(100) 200	(100) 200	[illegible] 200	[illegible]							
				(100) 200	(100) 200	(100) 200	(100) 200	[illegible]						
					(100) 200	(100) 200	(100) 200	(125)	200	[illegible]				
						(100) 200	(100) 200	(125)	200	(125)	(125)	[illegible]		
							(100) 200	(125)	200	(125)	(125)	(125)	(125)	[illegible]

By the end of 1984, CTA plans to have 610 accessible rail cars in operation. These will be the 2400 series, the 2600 series and first cars of the second 300-car option on the 2600 series from Budd. The total fleet size will be 1200 cars, of which 320 cars will be of the 2000 and 2200 series, which, while not accessible, are compatible to operate in trains with 2400 and 2600 series cars. The remaining 270 cars will be of the 5-50 double-end cars, 4 articulated cars and 220 cars of the 6000 series.

Thus 930 of CTA's 1200 rail cars will be suitable to operate in trains with accessible features for wheel chair riders. The only routes which will not have accessible cars assigned will be Evanston Shuttle from Howard Street to Linden Avenue and Skokie Swift. CTA would operate accessible fixed-route buses in lieu of accessible cars on these branches until replacement of these cars in 1991. On the remaining routes on the CTA system, while not every train will have one accessible car, the average of cars operated will be over the UMTA 504 mandate.

To replace these non-accessible cars prior to 1991 would mean retirement of equipment before the end of its useful lifespan or retrofitting (which is expensive and perhaps structurally unsound) of these cars near the end of their useful lifespan. The cars operated in Evanston Shuttle and Skokie Swift service are one-man double-ended cars which cannot be replaced by other cars in the fleet but must be replaced by new cars.

The CTA has developed Rail Car Replacement Program through the year 2000 providing for wheel chair access for 66% of the fleet by 1986. (See GOM 80-19 attached).

Section 504 of the Rehabilitation Act of 1973 prohibits discrimination on the basis of handicap in federally-assisted programs and requires full accessibility by 1984. According to the Surface Transportation Assistance Act, cost estimates developed under section 321 may serve as the basis for transition plans required by the Secretary of Transportation for meeting the requirements of Section 504 of the Rehabilitation Act. UMTA engaged DeLeuw, Cather/Persons to undertake a Section 321 Rail Retrofit Evaluation of CTA. The report of this study dated January, 1980, proposes that 2000, 2200 and 6000 series type cars with blinker type doors be retrofit with sliding doors and that 2000, 2200, 2400, 2600 and 6000 series type cars be retrofit with audible and visual door alarms.

The 321 study did not include cost estimates for seat, stanchion and barrier panel modifications necessary to provide for wheelchair securement. Wheelchair securement is believed essential for the safety of the wheelchair passenger and is included in this retrofit plan.

Urban Mass Transit Administration Research and Development in conjunction with Transportation Systems Center and the Veteran's Administration are currently investigating the need for and possible technology for gap fillers. No such technology exists at this time and no capital cost estimate or schedules are given for this item. Such devices, either car-borne or on stations will also increase operating costs.

The 321 study identifies $950/year/gap filler as the continuing operation and maintenance cost of the gap fillers. With a fleet of 1200 railcars having 4800 gap fillers, the annual O & M cost would be $4,560,000 at 1979 prices.

Appendices A, B, C and D delineate tasks, time duration and costs for retrofit of CTA cars. Table I delineates the "Fleet Retrofit Schedule" by years and quarters. For planning purposes, year 1 of Table I is assumed to be 1982, the earliest that retrofit funding is likely. If funding is delayed beyond 1982, then re-evaluation of the retrofit plan is necessary. While retrofit of some 6000 series cars and all 1-50 series cars is shown on Table I, it is unlikely that the economics of such a retrofit can be justified. Referring to the "Railcar Replacement Program" reveals that these cars will be replaced in 1991-92 at an age in excess of 30 years. The cost of the retrofit must then be amortized over only the 5 remaining years of car life. Rather than retrofit these cars, it seems prudent to adopt an interim strategy for serving the E & H requirements of the Skokie Swift and Evanston services through 1992.

Table I shows retrofit of 2000 series cars beginning in 1985 at the earliest. It is questionable whether such a retrofit can be justified for the following reasons:

1. Based on the "Railcar Replacement Program" the 2000 series cars will be phased out in 1992 and 1993. This expensive retrofit must then be amortized over a period of only 7 years.

2. The 321 Contractor stated, "Because the Pullman-built aluminum cars are already evidencing structural failures, modifications to these cars for wheelchair access will, of necessity, be expensive. It is our recommendation that unless a total re-evaluation of the structural design of these cars is progressed, that modification for wheelchair access not be attempted."

3. The trucks of the 2000 series cars are high maintenance items compared to those of other series.

4. The operation of 2000 series cars must be limited to routes where the usually severe ground borne vibration caused by these trucks can be tolerated. This pounding is debilitating to CTA trackway and structures.

Taken as a whole, early replacement of 2000 series cars is likely more prudent than retrofit.

The 48 railcars whose retirement is delayed due to retrofitting work on the remainder of the fleet are termed the "replacement fleet" in the 321 study. Per the 321 study, the replacement fleet costs $7,500 per car per year more to operate and maintain than the cars they replace during the retrofit period. Therefore, an additional O & M cost will be experienced during retrofit as follows at 1979 prices:

1983 -	$ 30,000
1984 -	360,000
1985 -	360,000
1986 -	360,000
1987 -	90,000
Total	$1,200,000

RAIL CAR COMMITTEE JS 9-15-80

Series Number	Replacement Age (Years)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1999	2000	2007	2008
51,53,54,75	37-38	4	4	4	4	4	4												
6001-6200	30-31	120	60	42															
6201-6470	29-31	190	190	190	122	42													
6471-6670	29-31	178	178	178	178	178	100	40	4										
6671-6720	29-33	48	48	48	48	48	48	48	48	40	40	40	40						
5-50	31-32	46	46	46	46	46	46	46	46	46	46	46	28						
2001-2180	28-29	176	176	176	176	176	176	176	176	176	176	176	176	120					
2201-2350	30-30	144	144	144	144	144	144	144	144	144	144	144	144	144	144	120			
2401-2600	30-30	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	104	
2601-3200			60	178	296	416	536	600	600	600	600	600	600	600	600	600	600	600	600
3201-3462													22	142	262	262	262	262	262
3501-3644																24	144	144	144
3700-3894																		90	194
Totals		1100	1100	1200	1208	1248	1248	1248	1212	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Cars Received		0	60	118	118	120	120	64	0	0	0	0	22	120	120	24	120	90	104

RAIL CAR COMMITTEE JS 9-15-80

TABLE 1

FLEET RETROFIT SCHEDULE FOR WHEELCHAIR FULL ACCESSIBILITY

YEARS / QUARTERS	1				2				3				4				5				6			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DESIGN DOOR RETROFIT	X	X	X	X	X	X	X																	
TEST & RETROFIT 2200 SERIES CARS							X	X	X	0	0	0	0											
TEST & RETROFIT 2000 SERIES CARS							X	X	X	X			0	0	0	0	0	0						
TEST & RETROFIT 1-50 SERIES CARS							X	X	X								0							
TEST & RETROFIT 6000 SERIES CARS							X	X	X									0						
CONSTRUCT NEW HAMLIN SHOP	X	X	X	X	X	X	Ø	Ø	Ø	Ø														
RETROFIT 2400 SERIES CARS										0	0	0	0											
RETROFIT 2600 SERIES CARS														0	0	0	0	0	0	0	0			
COST (1979 BASE IN THOUSANDS) *	150				2,945				13,830				21,145				20,470				165			
COST (INFLATED IN THOUSANDS) *	189				4,007				20,320				33,555				35,081				305			

X - PRE MASS PRODUCTION PHASE

0 - MASS PRODUCTION PHASE

Ø - CONSTRUCTION PHASE

* COSTS BASED ON ESTIMATES PREPARED BY DE LEUW/CATHER IN 1979 FOR ALL DOORS ACCESSIBLE AND 8% ANNUAL INFLATION. HAMLIN SHOP ESTIMATE BY CTA. ASSUMED YEAR 1 TO BE 1982.

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Appendix A

CONSTRUCT HAMLIN RETROFIT SHOP

1.	Prepare RFP for consultant, distribute RFP's and receive proposals.	3 months
2.	Evaluate proposals, select best qualified consultant, and award contract.	3 months
3.	Design and produce specifications for retrofit shop building (by consultant)	6 months
4.	Prepare RFQ from contractors, distribute RFQ's and receive bids on shop building.	3 months
5.	Evaluate bids and award contract.	3 months
6.	Construct shop building, pits, track and etc.	12 months
	TOTAL	30 months

Total Cost (1979 Dollars)	$ 975,000
Total Cost @ 8%/year inflation	1,248,905

GMA/pab

Revised
8/25/80

Appendix B

ELDERLY & HANDICAPPED RETROFITTING

1.	Prepare RFP for consultant, distribute RFP's and recieve proposals	3 months
2.	Evaluate proposals, select best qualified consultant and award contract.	3 months
3.	Analyze 2000, 2200, 6000 and 5-50 series cars in detail to determine present structural condition. Design structural modifications to permit installation of 2 panel sliding doors, audible/visual door closure alarm, wheelchair securement and no-motion interlock.	6 months
4.	Prepare contract drawings and specifications for retrofit of 5-50, 2000, 2200, 2400, 2600 and 6000 series cars.	3 months
5.	Prepare RFQ's for contractors, distribute RFQ's and receive bids.	3 months
6.	Evaluate bids and award contracts.	3 months

2000, 2200, 6000 and 5-50 SERIES CARS

7.	Retrofit one pair of 2000, 2200, 6000 and 5-50 series cars with sliding doors, audible-visual door closure alarm, wheelchair securement and no-motion interlock.	6 months
8.	Factory tests (including squeeze test) of prototype retrofits.	1 month
9.	Service test and modifications of prototype retrofits.	3 months
10.	Production retrofit of 2000 series cars. (174 cars)	*11 months
11.	Production retrofit of 2200 series cars. (142 cars)	*9 months
12.	Production retrofit of 5-50 series cars. (44 cars)	*3 months

13.	Production retrofit of 6000 series cars (38 cars)	*3 months

2400 and 2600 SERIES CARS

7.	Retrofit 2400 series cars with audible/visual door closure alarm, wheelchair securement and no-motion interlock. (194 cars)	**8 months
8.	Retrofit 2600 series cars with audible/visual door closure alarm and wheelchair securement. (600 cars)	**24 months

Total Cost (1979 Dollars)	$52,730,000
Total Cost @ 8%/year Inflation	$83,639,095

*See Appendix C
**See Appendix D

GMA/pab

Revised
8/25/80

Appendix C

RETROFIT 6000 & 5-50 SERIES CARS
RETROFIT 2000 & 2200 SERIES CARS

1. Remove from service, separate pairs, prepare for shipment, load on flatcar	2/5 weeks
2. Transport to contractor via rail.	2 weeks
3. Retrofit doors, install audible-visual door closure alarm, wheelchair securement location and interlock:	
a. 5-50, 2200 & 6000 series cars	4 weeks
b. 2000 series cars	5 weeks
4. Transport to CTA via rail.	2 weeks
5. Remove from flatcar, restore to service condition, reconnect as pairs, test, return to service.	3/5 weeks
cycle time (5-50, 2200 & 6000)	9 weeks
cycle time (2000)	10 weeks
Set Up Time Each Series	5 weeks
Modification Rate (5-50, 2200 & 6000)	4 cars/week
(2000)	3.2 cars/week
Replacement Fleet 4 cars/week x 9 weeks/cycle	36 cars
Modification Time (142 + 38 + 44)/4 + 174/3.2 + (3x5) +5	130 weeks

GMA/pab

Revised
8/25/80

Appendix D

RETROFIT 2400 & 2600 SERIES CARS

1.	Move car to shop.	2/5 weeks
2.	Install modifications.	1 week
3.	Move car to home terminal.	2/5 weeks
4.	Inspect car and return to service.	1/5 weeks
	Cycle Time	2 weeks
	Modification Rate	6 cars/week
	Replacement Fleet 6 cars/week x 2 weeks/cycle	12 cars
	Modification Time (194 + 600)/6 + 1	133 weeks

GMA/pab

Revised
8/25/80

Rail Car Fleet Description and Make-up

CTA's rail system presently employs 1100 revenue railcars. The fleet has an average age of approximately 17 years. The oldest cars were built in 1947 and the newest in 1978.

Of the present 1100 railcars all but 50 cars are married pairs. Four (4) cars of the fleet are three-section articulated cars for one-man operation on the Skokie Swift service. Forty-six (46) cars are double-ended and arranged for one man, single car operation. All but 194 cars, the 2400 series, have blinker doors which encumber wheel chair access. Of the present 1100 railcars, 515 are air conditioned.

An order for 300 railcars (150 married pairs) was placed in 1979 and these cars, the 2600 series, are presently under construction. The option in the current contract permitting purchase of up to 300 additional railcars (150 married pairs) must be exercised by October, 1981. Delivery of these 600 railcars will be completed in 1986 at which time the average age of the fleet will be approximately 10 years. The 2600 series cars, like the 2400 series cars, will have two leaf, sliding doors, allowing wheel chair access for 66% of the cars of the fleet. The addition of the 2600 series railcars will increase the fleet percentage of air conditioned cars to 93%.

Rail Car Replacement Parameters

1. The practical revenue service life of railcars in CTA service is 30 years.

2. The fleet will expand to 1200 railcars as a result of the O'Hare Extension.

3. Expansion of the fleet due to expansion of the present system (other than O'Hare) or growth in ridership is not considered in this railcar replacement plan.

4. This replacement plan will assume that 600 cars of the 2600 series will be purchased under the current procurement contract.

5. The need for one-man, double-ended cars will continue for the foreseeable future.

Rail Car Replacement Plan

Table 1 delineates by series the proposed railcar replacement schedule developed from the parameters. The table also delineates ages of the railcars at time of replacement.

It is to be noted that the plan shows the articulated cars being used significantly longer than 30 years. Because these cars are unique and historical, it is believed

that they will remain in service beyond 30 years although options to this plan are available by reassignment of some cars of the 5-50 series. The articulated cars are shown as phased out in 1991 when an order will be placed for both married pairs and double-ended single cars.

It should also be noted that literal adherence to the 30-year replacement parameter would have required an order for 86 railcars in 1990 and another order for 176 railcars in 1993-94. Since economies of size accrue to larger orders, the replacement plan proposes a combined order of 262 cars spread over the years 1991, 1992 and 1993. This causes some 6000 series type cars to exceed 30 years in service while the 2000 series is phased out one or two years short of 30 years of service. Early retirement of the 2000 series is considered to be prudent due to problems with car structure and the trucks.

Series Number	Replacement Age(Years)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1999	2000	2007	2008
51,53,54,75	42-43	4	4	4	4	4	4	4	4	4	4	4							
6001-6200	30-31	120	60	42															
6201-6470	29-30	190	190	190	114														
6471-6670	28-29	178	178	178	178	172	52												
6671-6720	27-33	48	48	48	48	48	48	36	36	36	36	36	36						
5-50	31-32	46	46	46	46	46	46	46	46	46	46	46	28						
2001-2180	28-29	176	176	176	176	176	176	176	176	176	176	176	176	120					
2201-2350	30-30	144	144	144	144	144	144	144	144	144	144	144	144	144	144	120			
2401-2600	30-30	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	104	
2601-3200			60	178	296	416	536	600	600	600	600	600	600	600	600	600	600	600	600
3201-3462													22	142	262	262	262	262	262
3501-3644																24	144	144	144
3700-3894																		90	194
Totals		1100	1100	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Cars Received		0	60	118	118	120	120	64	0	0	0	0	22	120	120	24	120	90	104

RAIL CAR COMMITTEE JS 9-15-80

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The 504 regulations require accessible connector service be provided to handicapped individuals, including those using wheelchairs, between accessible and inaccessible rapid rail stations. A number of options are available to the affected transit agency to provide the accessible connector service, including regular or special bus service, paratransit service, and any other appropriate method which transfers a handicapped individual to and from the area near an accessible rail station. The 504 regulations require that the quality and quantity of the connector service must be comparable to non-handicapped service.

By 1983, there must be some connector service between the accessible and inaccessible stations. Complete connector service is required within 30 years of the effective date. A number of current CTA routes can act as connector service. Generally, these routes parallel or duplicate existing CTA rail services.

Either through paratransit services or CTA and RTA route modifications, connector service improvements will be made by 2009 to comply with Section 504 regulations. In the future, when paratransit services in Chicago are in full operation, the CTA will determine, through a cost/benefit analysis, how to best eliminate service gaps.

If route modifications are selected, a number of CTA and RTA routes would require minor revision through expansion of hours of service.

Future efforts between the CTA and RTA to coordinate and improve services will insure that connector service is provided between accessible and inaccessible stations. The connector service will be provided with paratransit services and vehicles or with fixed route service.

J

CTA REVIEW OF

POLICIES, PRACTICES, AND PROCEDURES

SAFETY AND EMERGENCY POLICIES AND PROCEDURES

Inventory

Chicago Transit Authority bus operators, conductors, and motormen are instructed to provide for the safety of all passengers while on-board CTA vehicles/facilities. On the CTA rail system, standard operating procedures exist for emergency situations. Bus operators are similarly instructed. Evacuation procedures that specifically focus on the special needs of handicapped persons have been developed (see attached). A pilot training program for all bus and rail operating employees is being developed. All rail vehicles and buses are radio-equipped so that bus operators and motormen can summon assistance quickly. Local police and fire authorities do respond to calls from Chicago Transit Authority, and do provide assistance in emergency situations. In most cases, these calls are handled through the CTA control center.

There is a direct phone link between CTA and the Chicago Police Department. The safety and emergency policies and procedures of the Authority were discussed with the Mobility Limited Advisory group.

Specific Modifications

No further changes needed in safety and emergency policies and procedures have been identified.

Time Schedule

Not applicable.

Cost

Unknown.

cta	Operations division Standard operating procedure	Publication number: 08-25-80	Page 1 of 4

Title: Dealing with elderly/handicapped passengers during an irregular occurrence (pilot program issue)

Distribution

Classification: Operating and station employes

Other departments: None

DRAFT NO. 2

Ordered by: Harold H. Geissenheimer
General Operations Manager

Supersedes: None

Irregular occurrences

The fact that riders get upset when there is a service disruption is actually a credit to our employes' consistent efforts in having established safe, reliable, and efficient service as the standard.

But, just as emergencies occur in everyday life, emergencies occur in public transportation, which is affected by many forces - weather, traffic, equipment malfunctions, etc. - over which we may have little or no control. However, we do have control over the way we act and, during these occurrences, we should make an extra effort to provide assistance to compensate for the inconveniences to our passengers.

An irregular occurrence may be merely an inconvenience such as a delay or change in route, or it may be a major emergency such as a collision or a derailment. In either case, evacuation of the vehicle may be necessary.

If the occurrence is not "life-threatening", notify the controller. Orders may include instructions to wait for CTA supervisory personnel and/or police or fire department assistance.

During "life-threatening" occurrences, however, employes must often act immediately without waiting for orders when, in their judgment, staying aboard the vehicle would expose passengers to serious hazard.

Irregular occurrences and elderly/handicapped riders

Elderly and handicapped riders - either because they do not ride our system often and are not familiar with it, or because of their impaired physical abilities - are at a particular disadvantage during irregular occurrences. They may become confused or concerned about making connections or reaching their destinations. Every effort should be made to reassure them that provisions will be made to ensure that they safely complete their trips.

Agents, bus operators, conductors, motormen and supervisory personnel should read, observe, and periodically review the following procedures to ensure that the special needs of elderly and handicapped riders are met during irregular occurrences.

General guidelines - all fare-collecting employes

- If an elderly or handicapped person unintentionally rides past his or her stop, rides in the wrong direction, or boards the wrong bus or train, issue an emergency transfer to enable the rider to continue his or her trip on the desired service.

- If weather conditions cause system-wide service disruptions, make reasonable allowances for late transfers.

Bus operators

- When a schedule deviation occurs

  - Make appropriate announcements advising passengers of the situation.

  - If bus is delayed to such an extent that transfers of passengers on the bus and of those boarding are late, issue without charge new tranfers in exchange for late ones.

  - If bus is rerouted, issue emergency transfers to passengers who do not have a transfer but will be forced to ride another service to reach their destination.

  - If bus is switched back before reaching terminal, issue emergency transfers to passengers who do not have a transfer.

- When an emergency necessitates the discharge of all passengers from a bus

  - Walk through bus and check for elderly or handicapped passengers.

  - Assist elderly or handicapped passenger in alighting from bus or request an able-bodied passenger to do so.

  - Make sure elderly or handicapped passenger is in a position of safety (clear of traffic or other hazards).

  - If uncomfortable weather conditions exist (extreme heat or cold, snow, or rain), where possible, situate elderly or handicapped passenger in a place of shelter until replacement bus arrives.

Train crews

- When a schedule deviation occurs

- Make appropriate announcements advising passengers of situation.

- If train is delayed at a station and passengers desire to detrain, conductors must provide information on alternate service and issue emergency transfers to passengers who do not have a transfer and wish to ride another service.

- During single track movements, in addition to standard announcement, make announcement advising passengers of any change in berthing (right side to left or vice versa) early enough to allow sufficient time for elderly or handicapped riders to prepare to alight.

- If train is routed to another line, issue emergency transfers to passengers who do not have a transfer but will be forced to ride another service to reach their destination.

• When an emergency necessitates evacuation of a train

- Make a general announcement requesting elderly or handicapped persons to ask other passengers for assistance.

- Walk through all cars and check for elderly or handicapped passengers.

- Assist elderly or handicapped passengers (or request an able-bodied passenger to do so) in walking through cars if necessary, and in leaving train.

- If train is between stations and passengers must alight to track level, assure elderly or handicapped passengers that power is off and it is safe to alight.

- Persons in wheelchairs, or persons that can barely walk or are semi-ambulatory, if in cars not at a platform, will be carried by crew members. Wheelchairs, walkers, and other ambulatory aids will not be removed from cars that are not at a platform.

Agents

Occasionally, service disruptions may contribute to overcrowding on station platforms, with resultant hazards for all passengers but especially for the elderly and handicapped.

• When notified of a delay in service

- Inform intending passengers of the delay as they arrive at the booth.

- Notify passengers on platforms that do not have public address speakers, or request a passenger to do so.

- If there is an apparent delay, and you have not been notified
  - If the platform is already overcrowded, request boarding passengers to wait; do not accept fares.
  - Notify central assignment office (dial 411) and request instructions.
- If there is a major delay or evacuation of a train at a station
  - Issue emergency transfers as required.
  - Direct passengers to alternate service.

SENSITIVITY AND SAFETY TRAINING FOR PERSONNEL

Inventory

The Chicago Transit Authority currently includes in its overall training program elements that address the needs of the elderly and handicapped for its operators. A specific and comprehensive pilot training program is being developed in consultation with the Mobility Limited Advisory Committee. The program will enable operators to experience different types of handicaps. For example, for the large number of blind riders who use CTA services, the operators will be blindfolded for a period of time during the sensitivity training. This method will allow bus operators to be aware of the kinds of difficulties handicapped persons will encounter and to react appropriately when transporting handicapped persons. Existing operating rules/procedures have been consolidated and revised. The pilot program will give added emphasis to the revised rules/procedures so that the needs of the elderly and handicapped are better met.

Specific Modifications

When CTA begins operation of paratransit services in 1981, additional handicapped sensitivity training programs will be provided for all operators of such a service.

Time Schedule

A pilot training program for bus operators, conductors, and motormen will be completed as soon as possible. Current plans indicate that only personnel specifically assigned to CTA's paratransit "interim service" will be trained for that service. This training will be completed prior to the initiation of CTA's special service.

Cost

Unknown.

cta	Operations division General information	Publication number: 08-25-80	Page 1 of 4

Title: Dealing with elderly/handicapped passengers (pilot program issue)

Distribution

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DRAFT No. 2

Ordered by: Harold H. Henrikson
General Operations Manager

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Many elderly and handicapped persons, in an effort to lead normal and productive lives, use our transit facilities. To satisfy their transportation needs and to make them feel welcome as our customers, read, observe and periodically review these guidelines:

- Observe established CTA policy. The elderly and handicapped, as fare-paying customers, are guaranteed the right to ride CTA buses and trains. As part of that right, leader dogs are permitted on our vehicles to escort their blind masters.

- Know your passengers. In order to effectively deal with elderly and handicapped persons, you must first recognize them as such. This is not difficult with the elderly, but some handicaps may be "invisible," that is, to the average observer the person may not appear handicapped. Persons like this may include those with hearing difficulties and "exceptional" children or adults.

- Consider a person's sense of pride. Many elderly and handicapped people are very independent. Being able to get around on their own means a lot to them. Do not presume that they need or want your help. Always ask first, before offering assistance, and do so in a pleasant and sincere manner. Try not to assume an air of superiority and do not be condescending or patronizing.

- Be compassionate and understanding. Most of us know someone - a friend, a relative, perhaps someone very dear to us - who may be elderly or handicapped. Consider how you would feel if that person were treated discourteously. Or put yourself in the passenger's situation. How would you want to be treated?

- Be patient. Elderly or handicapped riders may take a little longer to board or alight or it may take longer to collect a fare from them. But, providing service for our passengers means a lot more than just "Staying on schedule."

- Be helpful. If an elderly or handicapped person boards your vehicle and it is crowded, make the following announcement: "Your attention please. Priority seating is intended for elderly and handicapped riders. Thank you for your cooperation."

- Provide information. If an elderly or handicapped passenger does not present a Special Users Travel Card for a reduced-fare ride and requests information on how to obtain one, advise passenger to call CTA (dial 664-7200, extension 467) and ask for "Riding passes."

Bus operators, train crews and agents can assure a more pleasant riding experience for elderly and handicapped riders by observing the specific instructions shown below:

Bus operators

- Follow standard operating procedures for curbing, starting and stopping, and turning, to provide a safe and comfortable ride for all passengers.

- Announce all stops clearly and loudly enough to be heard throughout the bus.

The following hints will help you deal with passengers who have specific disabilities:

- Blind passengers

  - If you see a person with a white cane or leader dog at or near a bus stop, assume that he or she is waiting for your bus and curb it.

  - If a blind passenger is waiting at a multiple-route bus stop, ask the person which route he or she wants, or announce your route.

  - If unable to curb properly, advise a blind passenger of any obstructions or uneven pavement surfaces.

  - If a blind passenger requests assistance when boarding or alighting, request a fellow passenger to assist. If no other person can assist, use utmost care in assisting. Let the blind person grasp your arm, then lead. Do not grasp the blind person's arm and attempt to guide him or her.

  - When a blind passenger boards, ask the person where he or she wishes to get off the bus. Blind passengers should be encouraged to sit near the front of the bus and should be informed of their stop enough time in advance so they can prepare to alight.

  - After a blind passenger has boarded, do not move the bus until the person is safely situated. After a blind passenger has alighted, do not move the bus until the person is clear of the bus.

- If blind passengers request assistance in depositing the fare, guide their hand to the farebox, but do not deposit fare for them.

- Physically handicapped passengers (on crutches, using cane, in cast, etc.)

  - If the person is alighting, choose a location that is free of obstructions such as posts, hydrants, broken curbs, etc.

  - After that person has boarded or alighted, do not move the bus until the person is safely aboard or clear of the bus. If there are seats available on the bus, wait until the person is safely seated.

Conductors

- Make all announcements clearly and early enough to allow sufficient time for elderly or handicapped riders to prepare to alight.

- After an elderly or handicapped passenger has boarded or alighted, close the doors in the opposite direction first; hold the doors open in the section of the train in which the person has boarded or alighted (to prevent train from moving) until the person is safely aboard or clear of train.

Motormen

- Follow standard operating procedures for berthing, starting and stopping, and operation through curves, to provide a safe and comfortable ride for all passengers.

Ticket agents

- Blind passengers

  - Caution person on any obstructions or hazards in the immediate area.

  - When collecting a fare, use statements such as "Here is your change" or "Here is your transfer." If the person does not request return of a transfer, still say "Okay" or "Thank you" when registering, so person has a way of knowing that turnstile is unlocked.

  - When returning change to the person, guide the person's hand to the change if necessary.

- Physically handicapped passengers (on crutches, using cane, in cast, etc.)

  - If the person is on crutches, or otherwise disabled, and requests assistance in passing through the turnstile, ask another passenger to assist, if present. If no other person can assist, courteously inform the passenger that you are not permitted to leave the booth.

Title: Dealing with elderly/handicapped passengers (pilot program issue)

The handicaps and infirmities of old age are something we all may face some day. Disabilities can afflict anyone. The elderly and handicapped did not choose to be that way

Remember, our obligation is to meet the needs of all our passengers. All of our riders, including the elderly and handicapped, deserve safe, reliable, and efficient service.

COORDINATION WITH AGENCIES AND INSTITUTIONS

Inventory

The Regional Transportation Authority has the major responsibility to coordinate plans, programs, and services for the special benefit of the handicapped in Northeastern Illinois. This responsibility of the Regional Transportation Authority (RTA) was established by agreement with the RTA, CTA, and Chicago Area Transportation Study. Surveys of existing paratransit operators that provide transportation to elderly and handicapped persons in the six county Northeastern Illinois area have been conducted. This information was compiled and published by the RTA and is currently being updated.

IDOT, through project guidelines and the A-95 review process, coordinates 16(b)2 operators. Paratransit operators sit on the Mobility Limited Advisory Committee.

The Chicago Transit Authority is currently examining how it can work with human service agencies that provide or support transportation service for handicapped persons. This analysis becomes especially important when CTA establishes its own paratransit service in the City of Chicago. Specific recommendations will be developed in consultation with the Mobility Limited Advisory Committee.

The RTA received a grant from UMTA to establish and demonstrate "brokerage" techniques in paratransit services. Most of the operations involved specifically benefit the elderly and handicapped.

Specific Modifications

Coordination of human service agencies that provide or support transportation service for the mobility-limited requires more effort.

Time Schedule

Not applicable.

Cost

Unknown.

APPROPRIATE INSURANCE COVERAGE

Inventory

The Chicago Transit Authority is self-insured and maintains an adequate damage reserve for its total transit operation to provide for damages caused by or attributable to the fault, failure, or negligence of the CTA. This damage reserve fund is expressed as a percentage of the CTA Operating Revenue. The experience of the Bi-State Transit System in St. Louis has been that claims may increase in some areas, but it is impossible at this time to determine what increase in the damage reserve fund should be. However, the introduction of severely handicapped persons, including wheelchair users on the bus and rail system, most likely will increase the severity of injury following accidents.

The special service which will be operated by the Authority will also be self-insured. Experience on similar systems indicates their safety performance is very good.

Specific Modifications

There are no changes needed at this time. Damage reserve requirements will be adjusted if operating experience demonstrates increased claim activity.

Time Schedule

Unknown.

Cost

Unknown.

LEASING, RENTAL AND PROCUREMENT PRACTICES

Inventory

The CTA has maintained a policy of prohibiting handicapped discrimination in its leasing, rental and procurement policies. CTA will continue to work with lessees and licensees to encourage the provision of accessibility features as appropriate and insure services and/or sales are available for handicapped. The CTA leases the 7th Floor of the Merchandise Mart, which is now being renovated. Remodeling efforts will include accessibility provisions at several washrooms. Future remodeling efforts will include accessibility elements as appropriate in accordance with applicable standards.

CTA reviewed its standard real estate lease and will amend it to specifically include an anti-discrimination clause. At the present time the CTA has four handicapped persons operating concessions.

The standard contract clause CTA uses with suppliers will also be modified to prohibit discrimination on the basis of handicap.

Specific Modifications

The Real Estate, Legal, and Materials Management departments are responsible for assuring that there will be no discrimination against handicapped persons with respect to CTA leasing, rental and procurement policies. The standard lease CTA enters into with its tenants will be modified with the inclusion of the following clause:

> "Tenant, in performing any act or service permitted under this lease, shall not discriminate against any worker, employee, or any member of the public, because of race, creed, color, religion, age, sex, national origin or physical and mental handicap. Any breach of this covenant may give the Lessor grounds for termination of this lease."

Time Schedule

Ongoing.

Cost

Unknown.

MARKETING CONSIDERATIONS

Inventory

Specific and comprehensive marketing programs for handicapped persons do not currently exist at the Chicago Transit Authority. Public information by the CTA is provided with press releases, timetables, maps, public service announcements, through extensive signage at bus stops and rail stations, and through the Regional Transportation Authority Travel Center. Recently, a teletypewriter was installed in the RTA Travel Center to better communicate with the deaf.

Specific Modifications

The Chicago Transit Authority is currently reorganizing its public relations program. Specific personnel will be assigned to work with the elderly and handicapped to enable them to better use public transportation and to provide a conduit for needed improvements to the CTA system. This consumer affairs group will be established under the External Affairs Division. When lift-equipped buses are purchased by the CTA, trips with lift-equipped vehicles will be so designated on CTA timetables. The CTA system map will also be modified to designate accessible stations. Every future effort will be made by the CTA to develop marketing programs that are considerate of the specific needs of the handicapped persons.

Time Schedule

Consumer orientation to the lift-equipped buses will begin as soon as the buses are put into service. The first lift-equipped small buses are expected to be delivered in 1981, and the first lift-equipped articulated buses in 1982. Special brochures will be printed and distributed as the services become available.

Cost

Unknown.

REGULATORY CONSTRAINTS

Inventory

The Chicago Transit Authority (CTA) was established by the State of Illinois as a municipal corporation for public ownership and operation of a transportation system in the metropolitan area of Cook County with the exclusive right to acquire, construct, reconstruct, maintain and operate facilities for local transportation, and to use the streets, City of Chicago owned subways and places. The enabling legislation creating the CTA was passed by the City Council of the City of Chicago on April 23, 1945. There are no regulatory constraints which would prohibit the establishment of accessible services within the fixed-route system. The CTA is also empowered to operate special service and equipment. It is believed that CTA's enabling legislation does not prevent it from sponsoring or providing para-transit services if a flat rate of fare is charged for use of these services.

Specific Modifications

No modifications are needed.

Time Schedule

Not applicable.

Cost

- 0 -

ACCOMMODATIONS FOR COMPANIONS OR AIDES OF HANDICAPPED TRAVELERS

Inventory

The Chicago Transit Authority presently allows handicapped passengers to ride CTA vehicles for one-half the full fare during all hours by presenting a special handicapped identification card which is issued by the Regional Transportation Authority. There are, however, no special fare provisions for companions or aides traveling with handicapped passengers on CTA vehicles. Companions or aides pay the full appropriate fare. Standard operating procedures require operators to allow seeing-eye dogs on-board all CTA vehicles.

Specific Modifications

No changes are needed.

Time Schedule

Not applicable.

Cost

- 0 -

INTERMODAL COORDINATION

Inventory

The CTA operates bus and rail service throughout the City of Chicago and 36 suburbs. CTA's excellent distribution of bus and rail lines provide for convenient transfers between these modes and commuter rail services. Both Union and North Western Stations are served by numerous bus routes. Intercity bus routes/lines are located at a number of CTA bus terminal facilities.

The CTA works closely with the RTA, suburban bus carriers, and commuter railroads to coordinate its services. Several standing committees, such as the Transit Carriers Coordinating Committee, Chicago Area Transportation Study Operations Committee, and the City of Chicago Technical Advisory Committee meet regularly to improve coordination of services, projects, and improvements.

Specific Modifications

No modifications are needed.

Time Schedule

Not applicable.

Cost

- 0 -

MAINTENANCE AND SECURITY OF ACCESSIBILITY FEATURES

Inventory

The Chicago Transit Authority's maintenance and security programs currently cover all aspects of the present transit operation. As new facilities, vehicles and services are added to the operation, maintenance and security coverage is expanded as necessary.

A major concern with the addition of accessibility features is that of vandalism. Basic facilities, such as vehicle seats, are vandalized frequently. The installation of accessibility features such as freestanding elevators, particularly in remote areas, would greatly increase vandalism costs. Unattended elevators at unattended stations may be subject to extensive vandalism. An added concern is maintenance of the lifts, bus availability impacts, and gap fillers (when technological developments permit the installation of such features on rail cars).

Specific Modifications

The maintenance program will need to be expanded as accessibility features begin to appear in the transit operation. As buses with lifts are purchased, additional mechanics will need to be hired and trained to repair the lifts. Frequent inspections of the lifts will be necessary to be certain that they are in good, safe, operating condition. Installation of elevators at stations will require additional maintenance efforts as well as security efforts.

Time Schedule

Expansion of the maintenance program is dependent on availability of funds to hire the necessary mechanics and provide adequate training to keep the lifts in good operating condition. The maintenance program will need to be expanded to include lift maintenance when the accessible articulated buses begin to arrive in 1982. Maintenance of elevators and other accessibility features will need to begin as they are put into operation.

Cost

Maintenance costs are included as part of vehicle operating costs, rail vehicle and station operating costs.

MANAGEMENT SUPERVISION OF ACCESSIBLE FACILITIES AND VEHICLES

Inventory

There are presently no facilities or vehicles accessible to non-ambulatory handicapped persons. On site supervision of the system as it is now, is provided by street supervisors who are strategically stationed throughout the service area to provide assistance to operators and passengers.

Specific Modifications

As facilities and vehicles are made accessible in accordance with the transition plan, adequate supervision will continue to be provided by street supervisors to insure the safety of passengers. Special problems that arise with regard to handicapped accessible facilities and vehicles will be monitored by the Operations Division.

While current plans do not call for additional supervision, additional supervision or recovery time may be necessary to provide adequate supervision of accessible facilities and vehicles. Close monitoring of this program will insure such a need is adequately addressed.

Time Schedules

Supervision of accessible facilities and vehicles will begin as the facilities are made accessible and with the introduction of accessible vehicles scheduled to arrive in 1981.

Cost

Unknown at this time; to be determined with future planning.

LABOR AGREEMENTS AND WORK RULES

Inventory

There is nothing in the labor agreements or work rules to prohibit the handicapped from using CTA services.

Specific Modifications

No changes are needed.

Time Schedule

Not applicable.

Cost

- 0 -

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